AV RECEIVER
RX-V673/HTR-6065/ RX-A720
SERVICE MANUAL

Note: When the DIGITAL P.C.B. or IC82 on DIGITAL P.C.B. is replaced, this unit will display “Internal Error” and will not operate at all without additional setting.

In such a case, report the serial number of this unit to the following e-mail address.

Yamaha Corporation will reply providing the setting procedure to make this unit operate properly.

E-mail: ycav-ysiss@gmx.yamaha.com

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel.
It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

RX-V673/HTR-6065/ RX-A720

■ CONTENTS

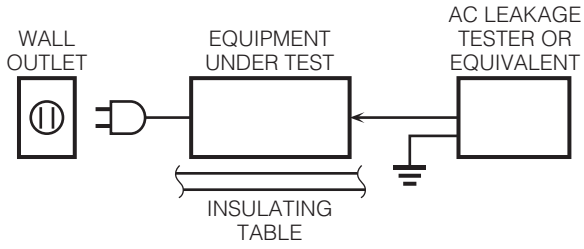
101237

YAMAHA
YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan
'12.05

■ TO SERVICE PERSONNEL

1. Critical Components Information
   Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V Models Only)
   When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohms shunted by 0.15 µF.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

For U model

"CAUTION"

"F3702: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 8A, 125V FUSE."

For C model

CAUTION

F3702: REPLACE WITH SAME TYPE 8A, 125V FUSE.

ATTENTION

F3702: UTILISER UN FUSIBLE DE RECHANGE DE MÉME TYPE DE 8A, 125V.

WARNING: CHEMICAL CONTENT NOTICE!

This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

About lead free solder

All of the P.C.B.s installed in this unit and solder joints are soldered using the lead free solder.

Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

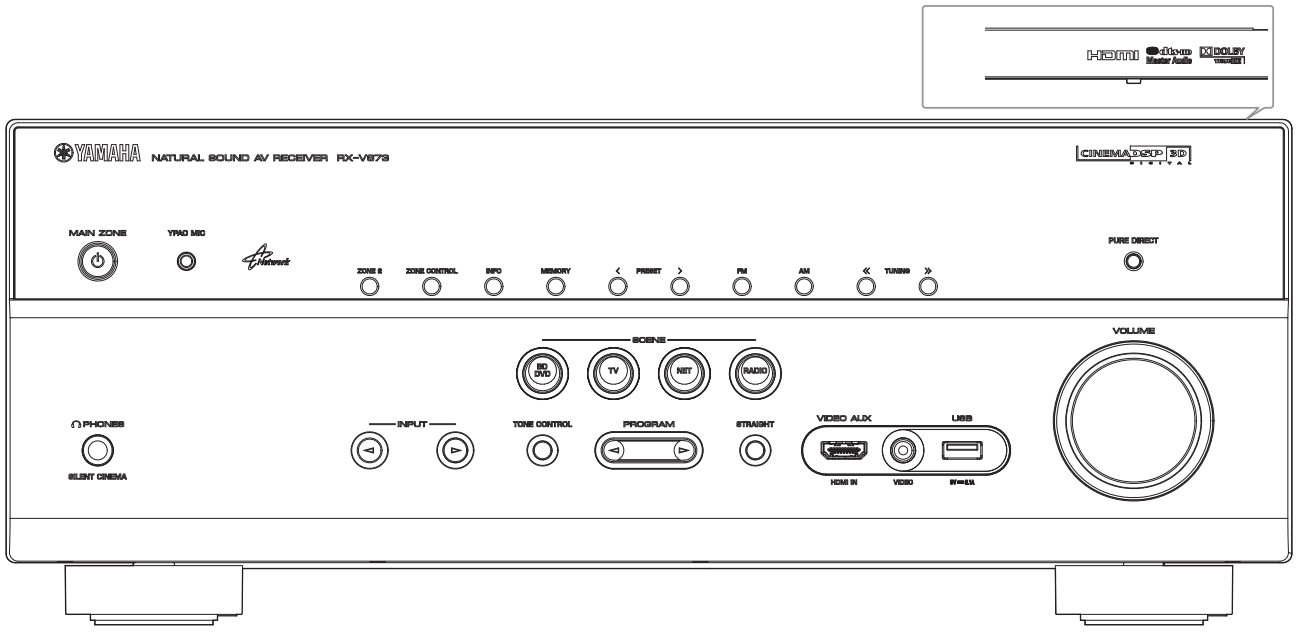
- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

Caution:

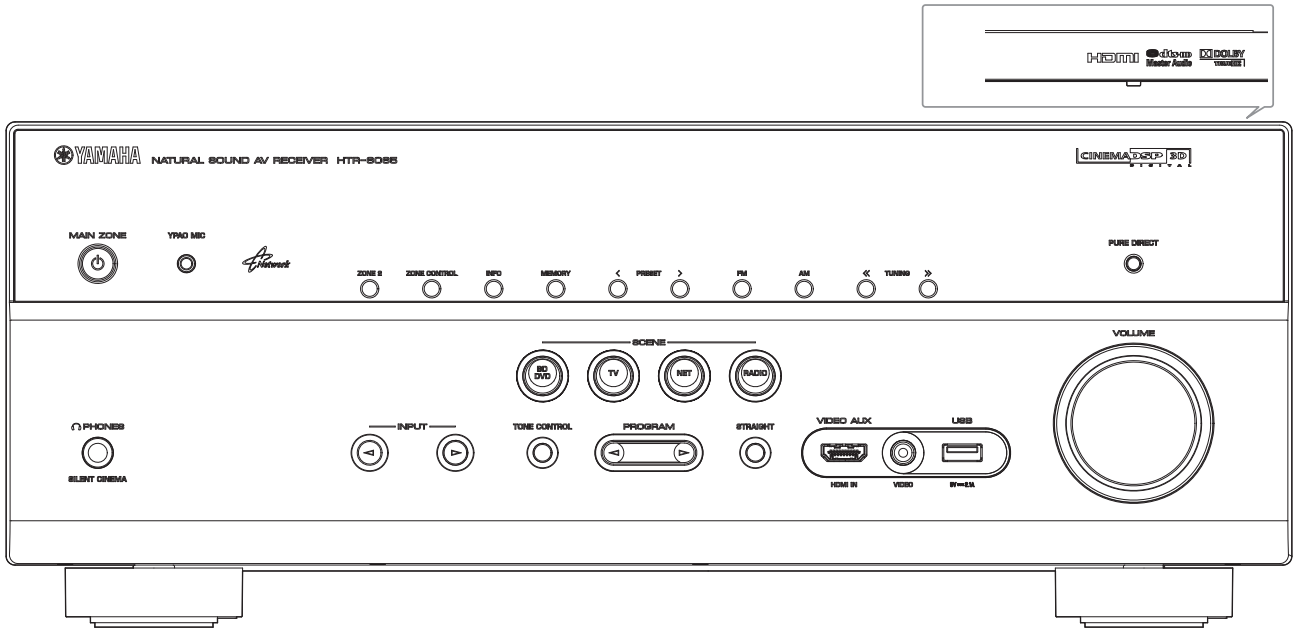
As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.

■ FRONT PANELS

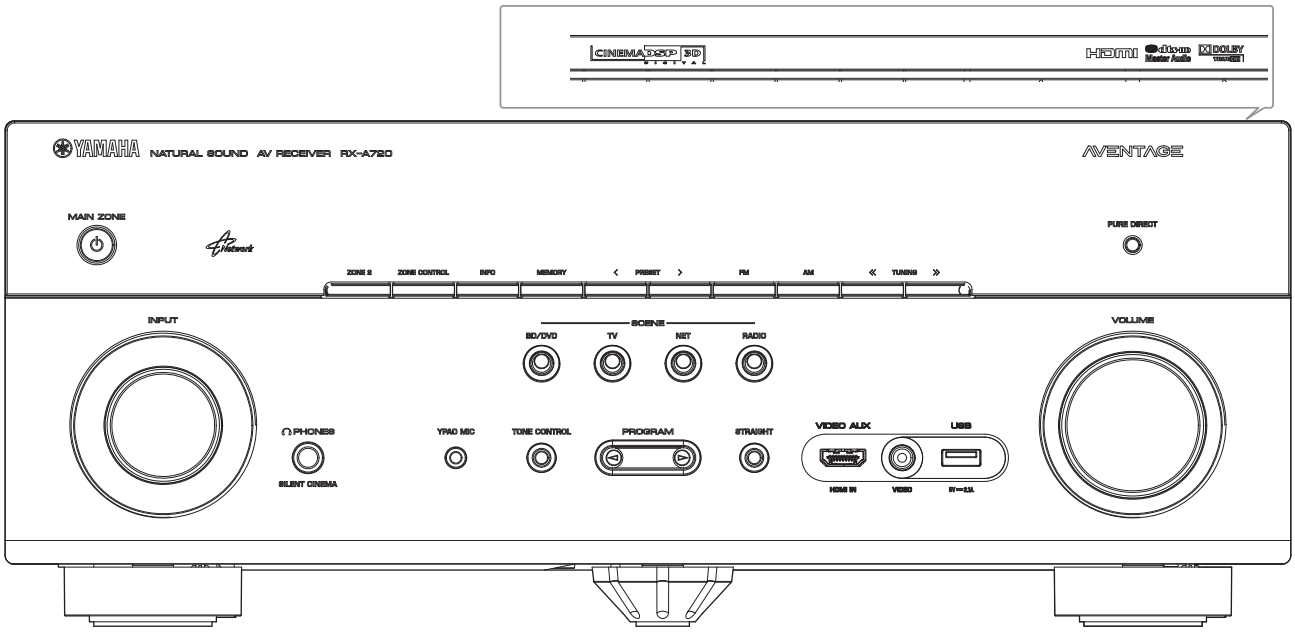
RX-V673 (U, C, R, T, K, A, B, G, F, L, S, H models)



HTR-6065 (A, F models)

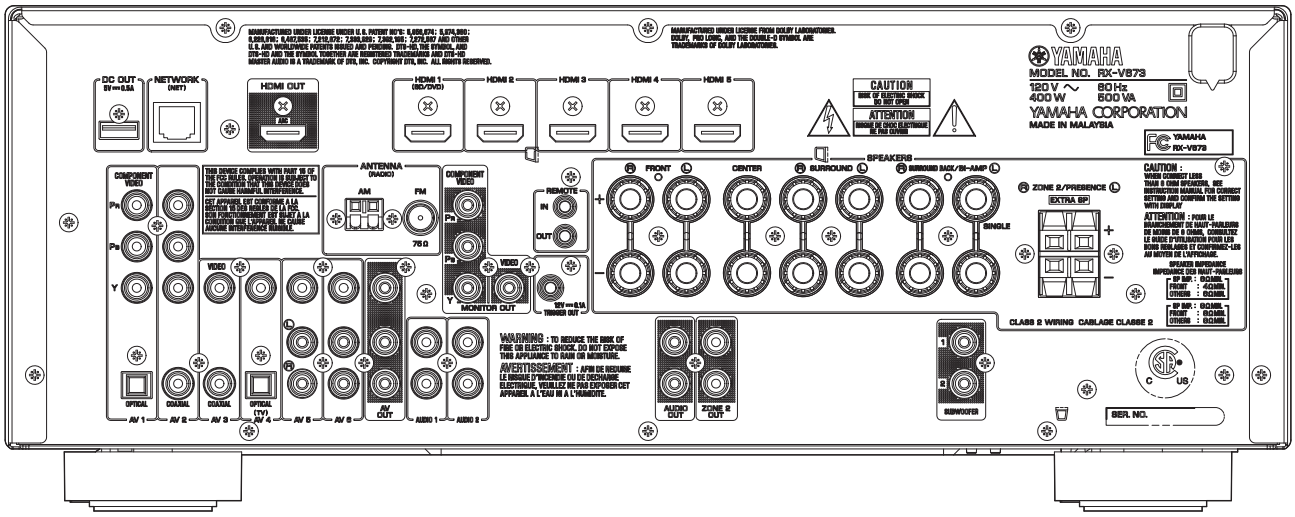


RX-A720 (U, C, A models)

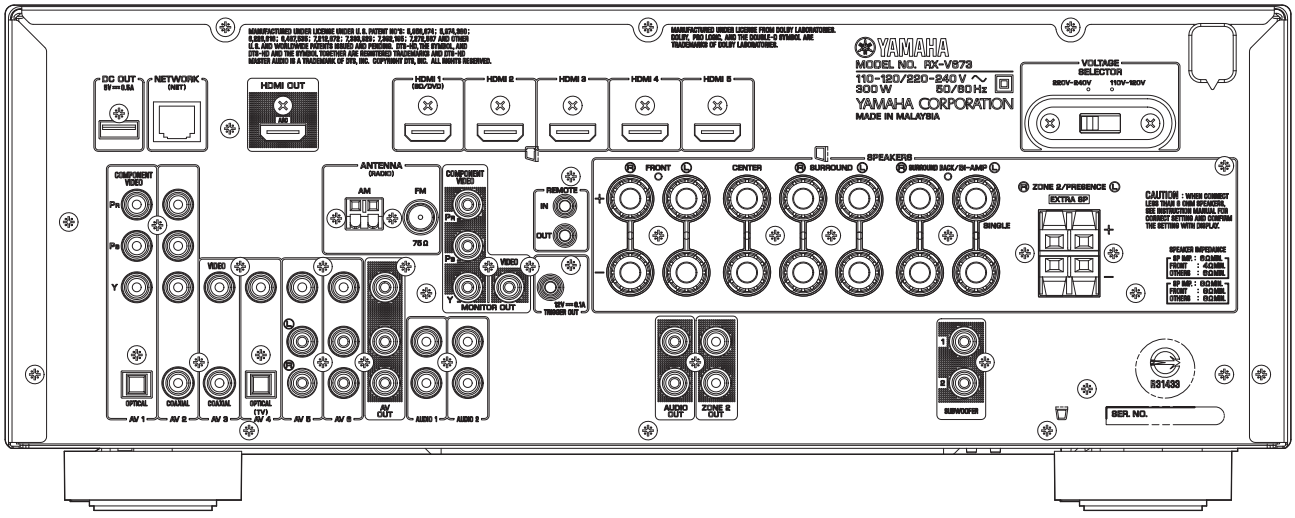


■ REAR PANELS

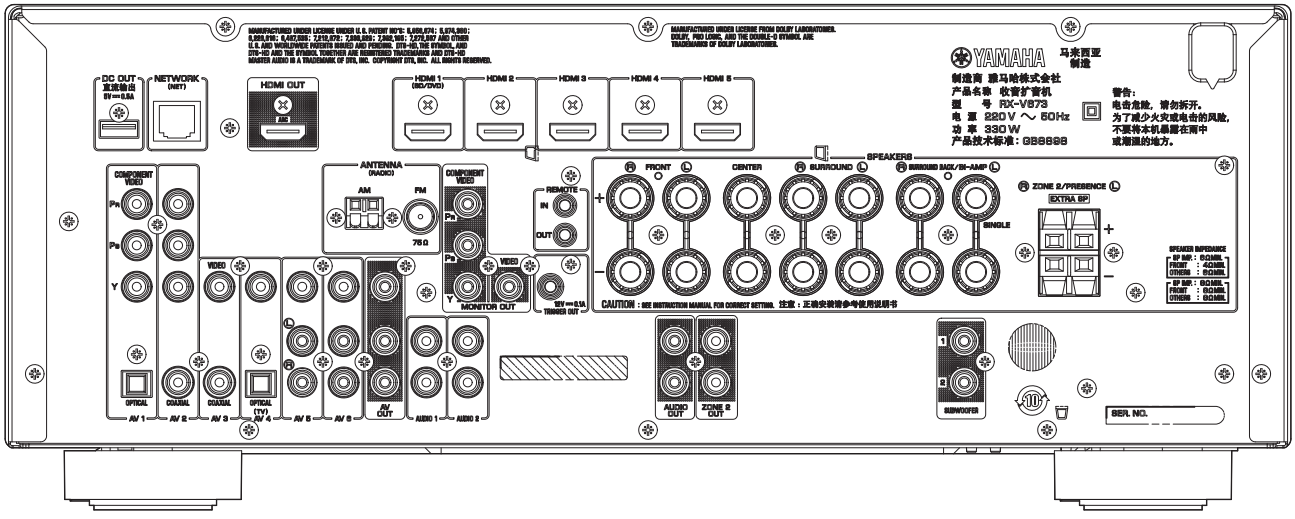
RX-V673 (U, C models)



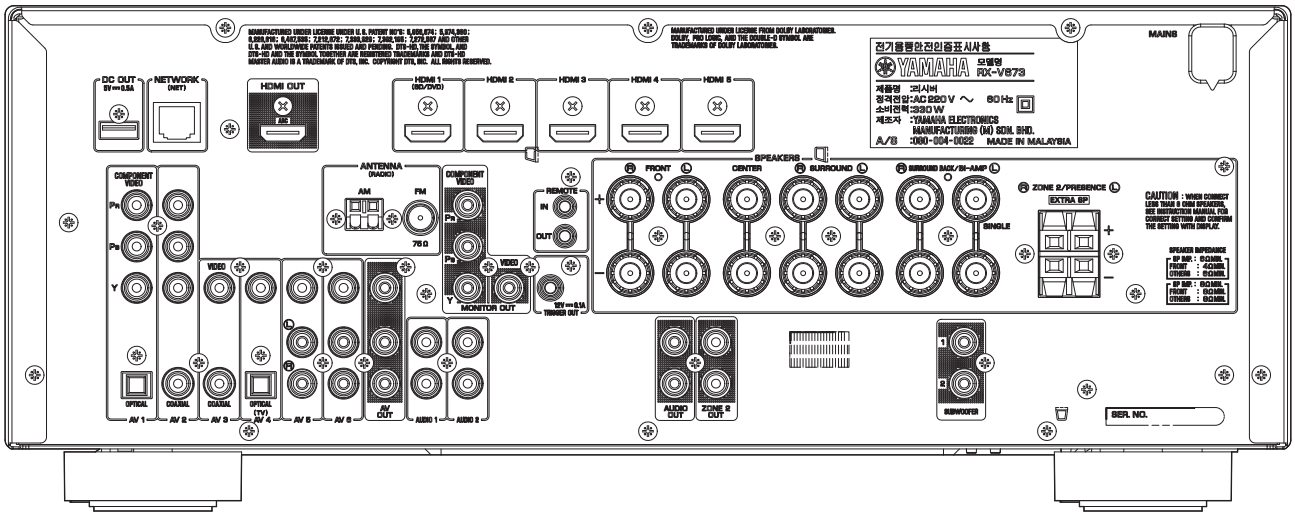
RX-V673 (R, S models)



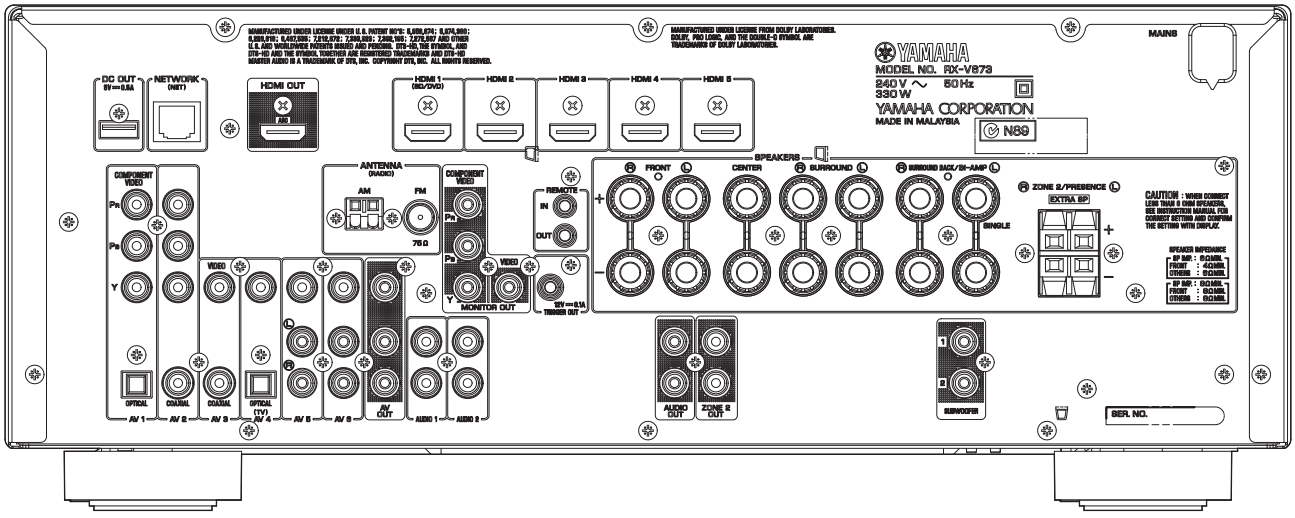
RX-V673 (T model)



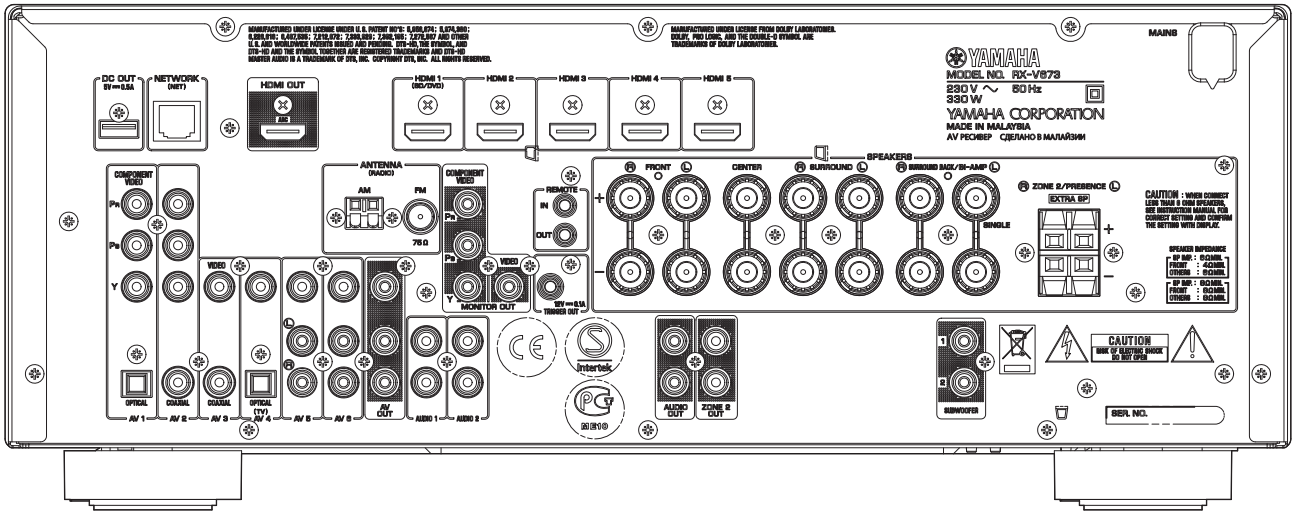
RX-V673 (K model)



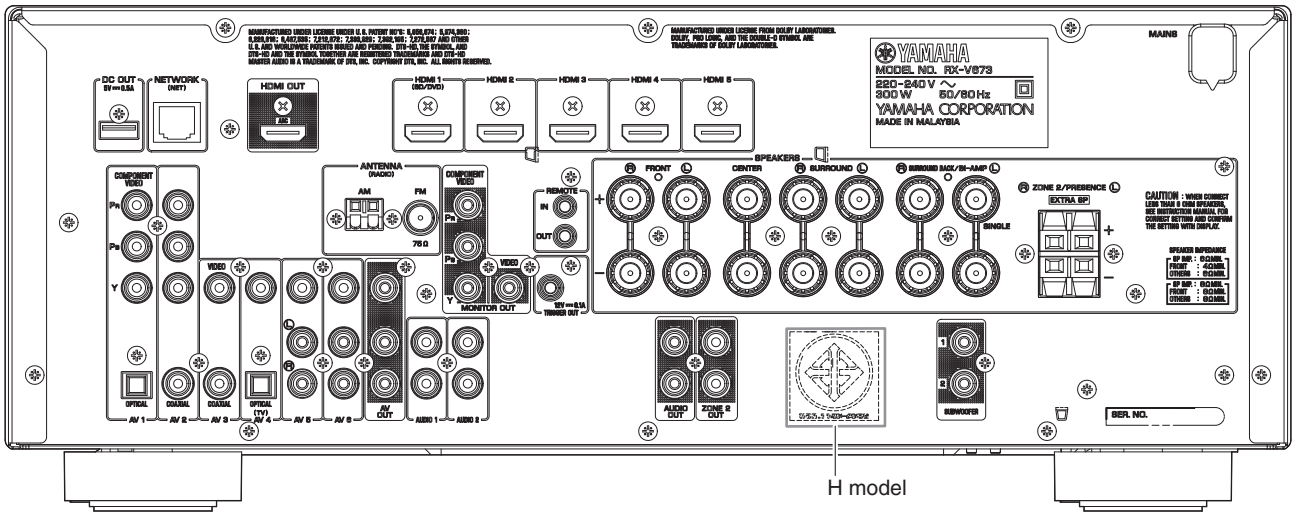
RX-V673 (A model)



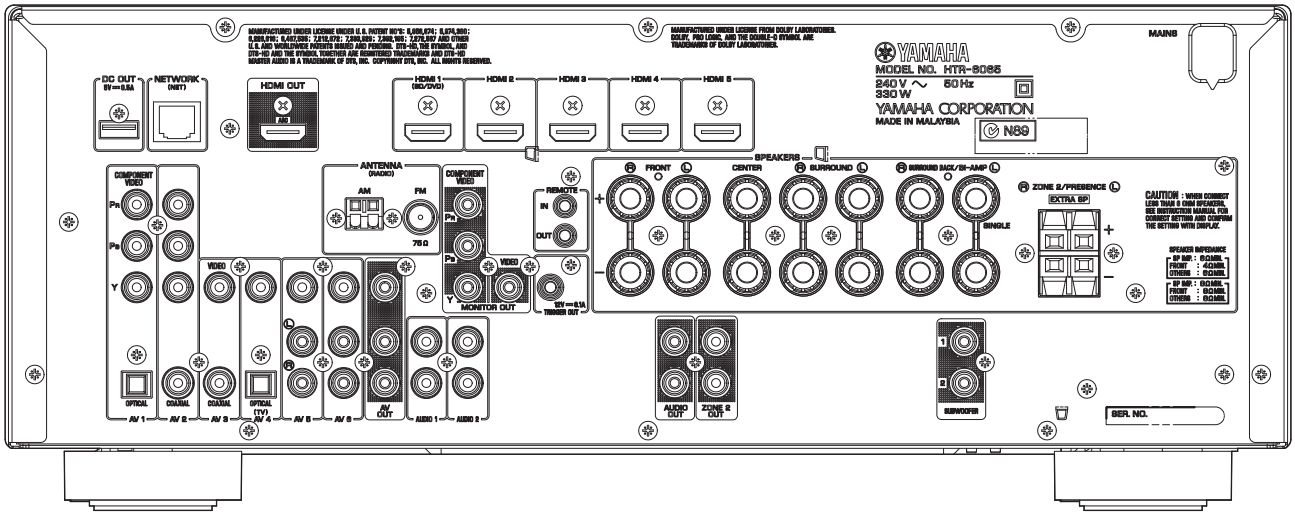
RX-V673 (B, G, F models)



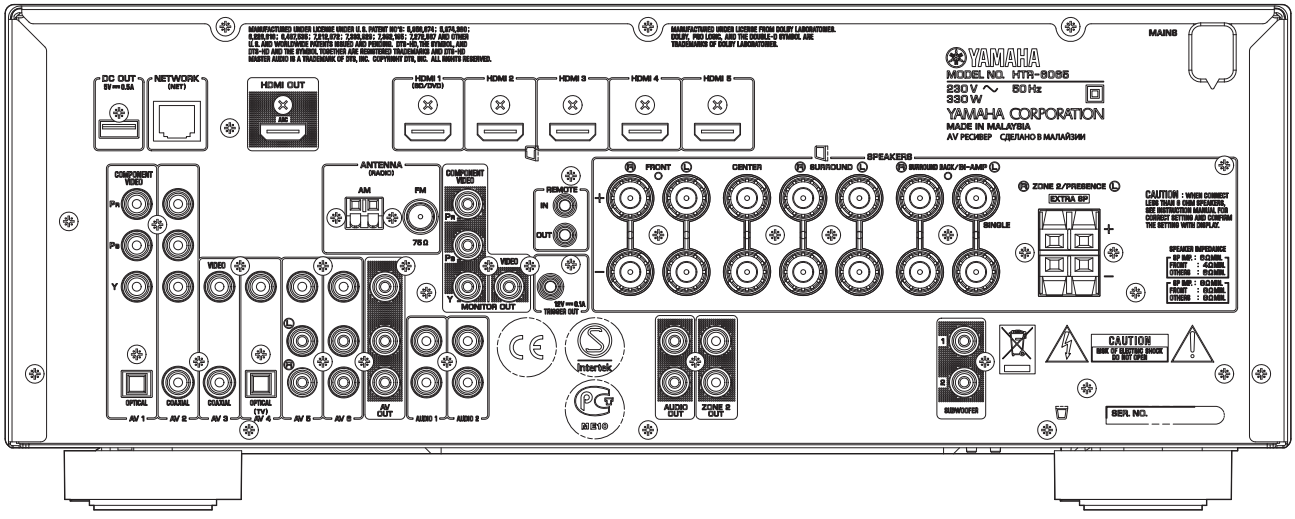
RX-V673 (L, H models)



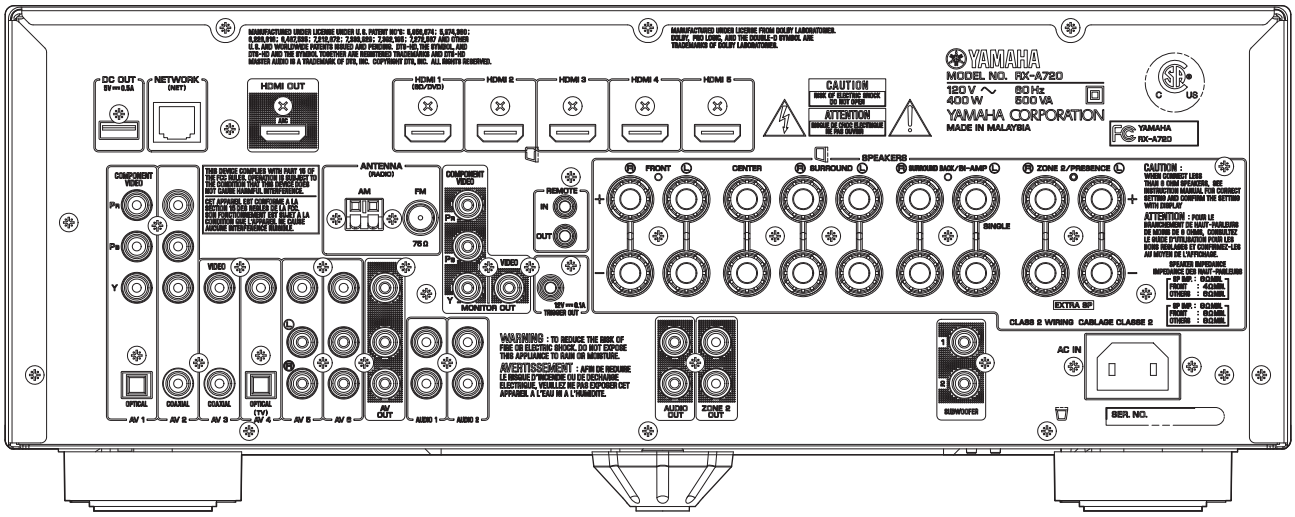
HTR-6065 (A model)



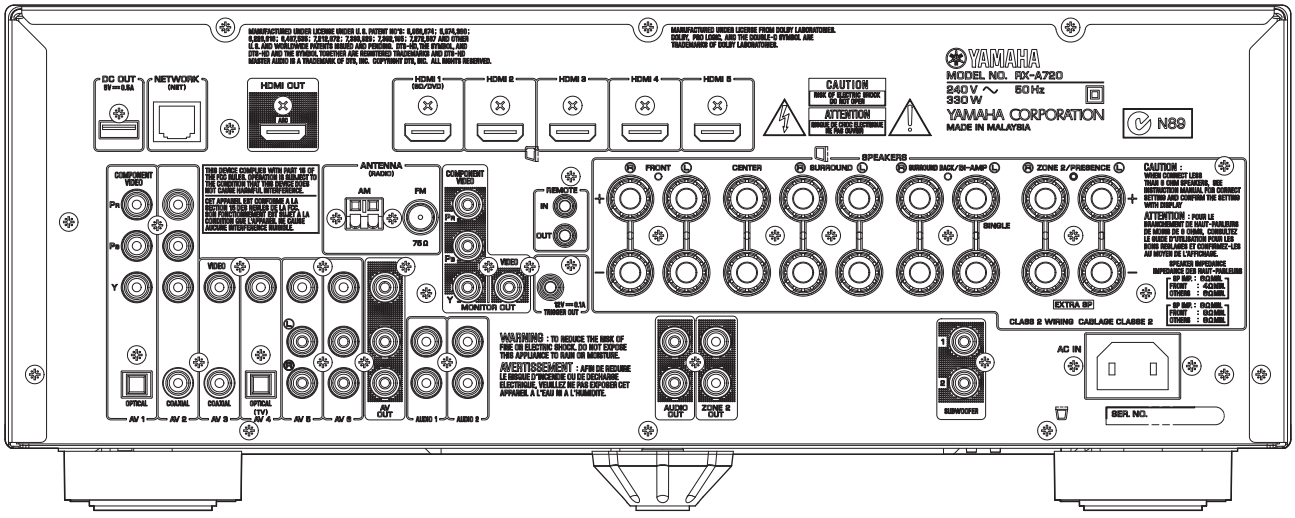
HTR-6065 (F model)



RX-A720 (U, C models)

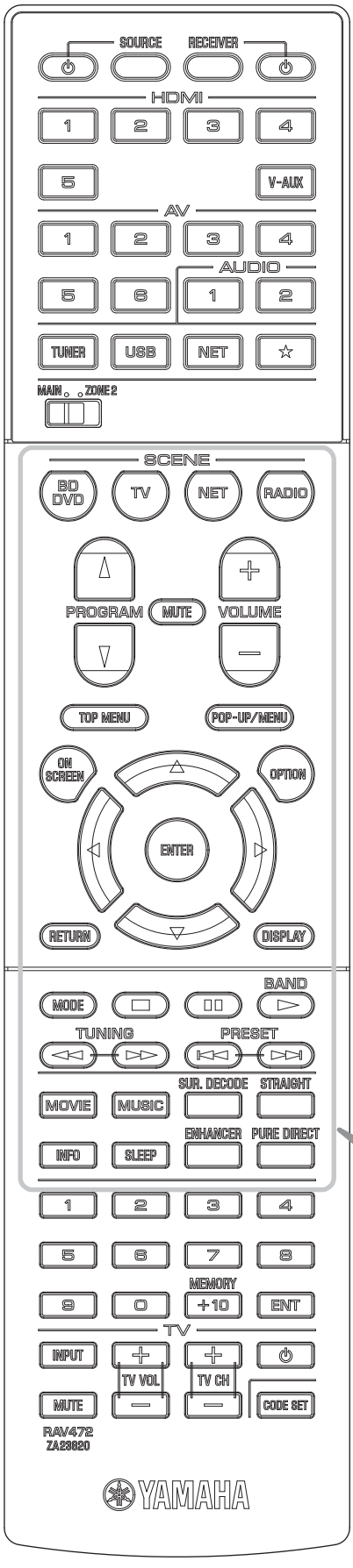


RX-A720 (A model)

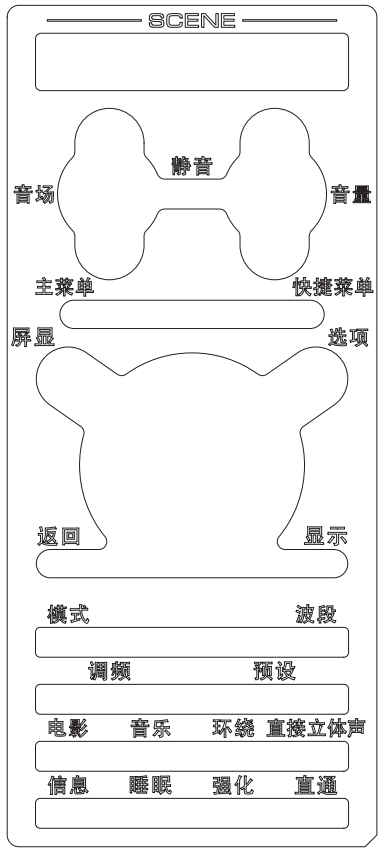


■ REMOTE CONTROL PANEL

RAV472



Remote control sheet
(T model)



■ SPECIFICATIONS

■ Audio Section

Rated Output Power (Power Amp. Section)

(1 kHz, 0.9 % THD)

– 1 channel driven –

U, C, R, T, K, A, B, G, F, L, S, H models (8 ohms)
- FRONT L/R ..... 125 W/ch
- CENTER ..... 125 W
- SURROUND L/R ..... 125 W/ch
- SURROUND BACK L/R ..... 125 W/ch

B, G, F models (4 ohms)
- FRONT L/R ..... 150 W/ch

– 2 channels driven simultaneously –

U, C, R, T, K, A, B, G, F, L, S, H models (8 ohms)
- FRONT L/R .....105 W + 105 W
- CENTER ..... 105 W
- SURROUND L/R .....105 W + 105 W
- SURROUND BACK L/R .....105 W + 105 W

(20 Hz to 20 kHz, 0.09 % THD)

– 2 channels driven simultaneously –

U, C, R, T, K, A, B, G, F, L, S, H models (8 ohms)
- FRONT L/R .....90 W + 90 W

Maximum Effective Output Power (JEITA) [R, T, K, L, S, H models]
(1 channel driven, 1 kHz, 10 % THD, 8 ohms)
- FRONT L/R ..... 150 W/ch
- CENTER ..... 150 W
- SURROUND L/R ..... 150 W/ch
- SURROUND BACK L/R ..... 150 W/ch

Dynamic Power Per Channel (IHF)
- FRONT L/R (1 channel driven)
  (8 / 6 / 4 / 2 ohms) ..... 130 / 170 / 200 / 240 W

Damping Factor (20 Hz to 20 kHz, 8 ohms)
- FRONT L/R to SPEAKER-A ..... 100 or more

Input Sensitivity/Input Impedance (1 kHz, 100 W/8 ohms)
- AV5 etc. ..... 200 mV / 47 k-ohms

Maximum Input Signal (1 kHz, 0.5 % THD)
- AV5 etc. (EFFECT ON) ..... 2.3 V

Output Level/Output Impedance
- AUDIO OUT ..... 200 mV / 1.2 k-ohms
- SUBWOOFER (2 ch stereo and FRONT SP: small)
  ..... 1 V / 1.2 k-ohms
- ZONE2 OUT ..... 200 mV / 1.2 k-ohms

Headphone Jack Rated Output/Output Impedance
(1 kHz, 50 mV, 8 ohms)
- AV5 etc. input ..... 100 mV / 560 ohms

Frequency Response (10 Hz to 100 kHz)
- AV5 etc., FRONT .....0 / -3 dB

Total Harmonic Distortion (20 Hz to 20 kHz, 50 W/8 ohms)
- AV5 etc. (PURE DIRECT) to FRONT SP OUT .....0.06 % or less

Signal to Noise Ratio (IHF-A Network) (Input shorted 250 mV)
- AV5 etc. (PURE DIRECT) to SP OUT ..... 100 dB or more

Residual Noise (IHF-A Network)
- FRONT L/R to SP OUT .....150 µV or less

Channel Separation (1 kHz / 10 kHz)
- AV5 etc. (Input 5.1 k-ohms shorted)
  ..... 60 dB or more / 45 dB or more

Volume Control/Step
..... MUTE / -80 dB to +16.5 dB / 0.5 dB step

Tone Control Characteristics

Bass
- Boost/Cut ..... ±6 dB / 0.5 dB step, at 50 Hz
- Turnover frequency .....350 Hz

Treble
- Boost/Cut .....±6 dB / 0.5 dB step, at 20 kHz
- Turnover frequency .....3.5 kHz

Filter Characteristics

FRONT, CENTER, SURROUND, SURROUND BACK small (H.P.F.)
..... fc=40/60/80/90/100/110/120/160/200 Hz, 12 dB/oct.

SUBWOOFER small (L.P.F.)
..... fc=40/60/80/90/100/110/120/160/200 Hz, 24 dB/oct.

Optical Jack, Coaxial Jack Support Frequencies
.....32 kHz to 96 kHz

■ Video Section

Video Signal Type

Monitor out (Wall paper)
- U, C, R, K models .....NTSC
- T, A, B, G, F, L, S, H models .....PAL

Video conversion
.....NTSC/PAL

Composite Video Signal Level
.....1 Vp-p / 75 ohms

Component Video Signal Level
- Y .....1 Vp-p / 75 ohms
- Pb/Pr .....0.7 Vp-p / 75 ohms

Video Maximum Input Level (VIDEO Conversion Off)
..... 1.5 Vp-p or more

Video Signal to Noise Ratio
..... 50 dB or more

Monitor Out Frequency Response (VIDEO Conversion Off)
- Component video signal level .....5 Hz to 60 MHz, -3 dB

■ FM Section

Tuning Range
- U, C models .....87.5 to 107.9 MHz
- R, L, S, H models .....87.5 to 108.0 / 87.50 to 108.00 MHz
- T, K, A, B, G, F models .....87.50 to 108.00 MHz

50 dB Quieting Sensitivity (IHF) (1 kHz, 100 % MOD.)
- Mono .....3 µV (20.8 dBf)

Signal to Noise Ratio (IHF)
- Mono .....71 dB
- Stereo .....69 dB

Harmonic Distortion (1 kHz)
- Mono .....0.3 %
- Stereo .....0.5 %

Antenna Input
..... 75 ohms unbalanced

■ AM Section

Tuning Range

U, C models ..... 530 to 1,710 kHz
R, L, S, H models ..... 530 to 1,710 / 531 to 1,611 kHz
T, K, A, B, G, F models ..... 531 to 1,611 kHz

Antenna

..... Loop antenna

■ General

Power Supply

U, C models ..... AC 120 V, 60 Hz
R, S models .....AC 110–120/220–240 V, 50/60 Hz
T model ..... AC 220 V, 50 Hz
K model ..... AC 220 V, 60 Hz
A model ..... AC 240 V, 50 Hz
B, G, F models ..... AC 230 V, 50 Hz
L, H models ..... AC 220–240 V, 50/60 Hz

Power Consumption

U, C models .....400 W / 500 VA
R, L, S, H models ..... 300 W
T, K, A, B, G, F models ..... 330 W

Standby Power Consumption (reference data)

HDMI control: OFF / Standby through: OFF
..... 0.1 W (typical)
HDMI control: ON / Standby through: ON
INPUT: HDMI1 (HDMI no signal)
..... 3.0 W (typical)
Network standby: ON
..... 2.0 W (typical)

Maximum Power Consumption [R, L, S, H models]
..... 590 W

Dimensions (W x H x D)

[RX-V673/HTR-6065]
..... 435 x 171 x 364 mm (17-1/8" x 6-3/4" x 14-3/8")
[RX-A720]
..... 435 x 171 x 367 mm (17-1/8" x 6-3/4" x 14-1/2")

Weight

[RX-V673/HTR-6065]
..... 10.2 kg (22.5 lbs.)
[RX-A720]
..... 10.7 kg (23.6 lbs.)

Finish

[RX-V673]
T model .....Gold color
U, C, R, T, K, A, B, G, F, L, S, H models ..... Black color
R, B, G, F, L, H models .....Titanium color
[HTR-6065]
A, F models ..... Black color
[RX-A720]
U, C, A models ..... Black color

Accessories

Remote control .....x 1
Batteries (R03, AAA, UM-4) .....x 2
FM antenna (1.4 m) .....x 1
AM antenna (1.0 m) .....x 1
YPAO microphone (6.0 m) .....x 1
Remote control sheet (T model) .....x 1
Power cable (2.0 m) (RX-A720) .....x 1

* **Specifications are subject to change without notice.**

U*.....*U.S.A. model
C*.....*Canadian model
R*.....*General model
T*.....*Chinese model
K*.....*Korean model
A*.....*Australian model
B*.....*British model
G*.....*European model
F*..... *Russian model
L*.....*Singapore model
S*.....*Brazirian model
H*.....*Thai model

SILENT ™
CINEMA

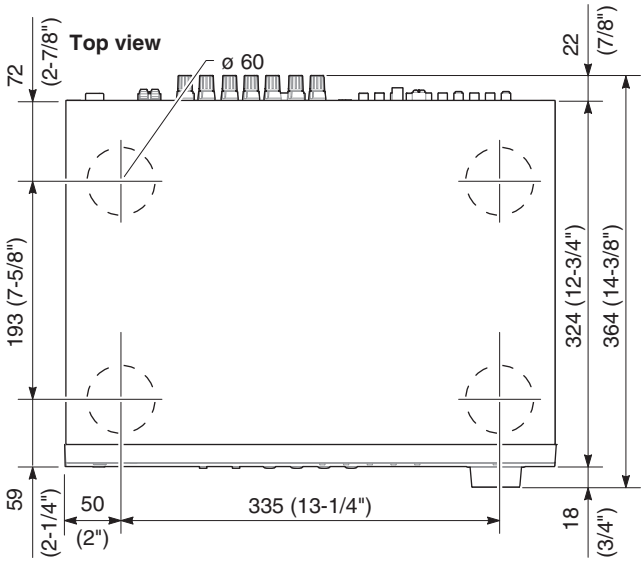
"SILENT CINEMA" is a trademark of Yamaha Corporation.

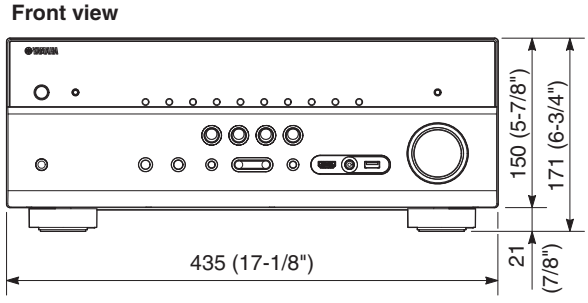
dlna CERTIFIED™

Windows®

- **DIMENSIONS**

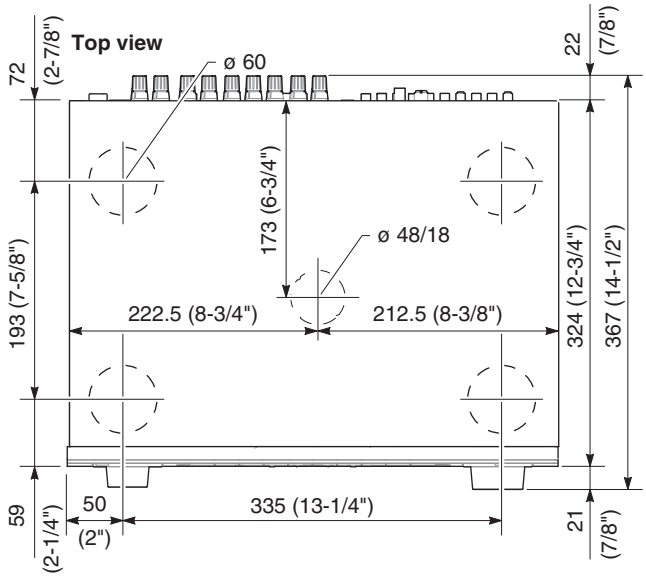
RX-V673/HTR-6065

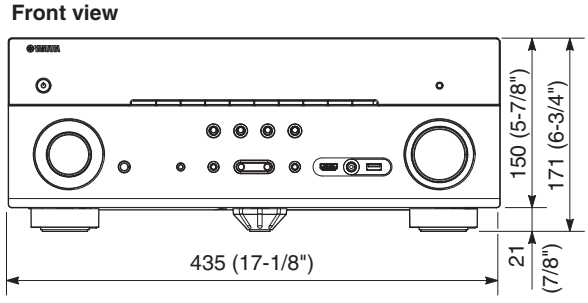




Unit: mm (inch)

RX-A720





Unit: mm (inch)

- **SELECT MENU**

Sound field parameters

Category	Program	Decode Type (*1)	DSP Level: -6 to +3 dB, [0]	Initial Delay: 1 to 99 ms	Surround Initial Delay: 1 to 49 ms	Surround Back Initial Delay: 1 to 49 ms	Room Size: 0.1 to 2.0	Surround Room Size: 0.1 to 2.0	Surround Back Room Size: 0.1 to 2.0	Liveness: 0 to 10	Surround Liveness: 0 to 10	Surround Back Liveness: 0 to 10	Reverb Time: 1.0 to 5.0 s	Reverb Delay: 0 to 250 ms	Reverb Level: 0 to 100 %	Direct: Auto / Off, [Auto]	Level: -5 to +5, [0]	Front/Rear Balance: -5 to +5, [0]	Left/Right Balance: -5 to +5, [0]	Height Balance: 0 to 10, [5]	Monaural Mix: Off / On, [Off]	Reset
MOVIE THEATER	Standard	●	●		●	○		●	○		●	○										●
	Spectacle	●	●	●	●	○	●	●	○													●
	Sci-Fi	●	●	●	●	○	●	●	○													●
	Adventure	●	●	●	●	○	●	●	○													●
	Drama	●	●	●	●	○	●	●	○													●
	Mono Movie		●	●			●			●			●	●	●							●
ENTERTAINMENT	Sports		●	●	●	○	●	●	○													●
	Action Game		●	●	●	○	●	●	○													●
	Roleplaying Game		●	●	●	○	●	●	○													●
	Music Video		●	●	●	○	●	●	○													●
CLASSICAL	Hall in Munich		●	●			●			●												●
	Hall in Vienna		●	●			●			●												●
	Chamber		●	●						●			●	●	●							●
LIVE/CLUB	Cellar Club		●	●			●			●												●
	The Roxy Theatre		●	●			●			●			●	●	●							●
	The Bottom Line		●	●			●			●												●
STEREO	2ch Stereo															●						●
	7ch Stereo																●	●	●	●	●	●
SUR. DECODE	SURROUND DECODER	●																				●
STRAIGHT																						

***1** Surround Decoder

		Panorama Off / On, [Off]	Center Width 0 to 7, [3]	Dimension -3 to +3, [0]	Center Image 0.0 to 1.0, [0.3]
Decode Type	DD Pro Logic				
	DD PL IIx Movie / DD PL II Movie				
	DD PL IIx Music /	●	●	●	
	DD PL II Music				
	DD PL IIx Game / DD PL II Game				
	Neo:6 Cinema				
	Neo:6 Music				●

• SET MENU TABLE

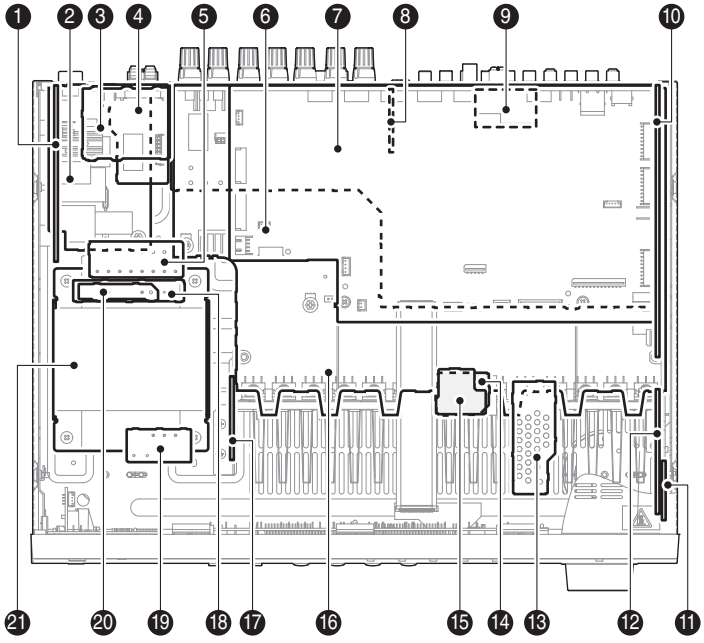
MAIN MENU	SUB-MENU	PARAMETER		VALUE [INITIAL VALUE]
Speaker Setup	Auto	Measure		Optimizes the speaker configuration automatically using YPAO.
		Result		Not Available
	Manual	Power Amp Assign		[Basic] / 7ch +1ZONE / 5ch BI-AMP
		Configuration	Front	Large / [Small] * When “Subwoofer” is set to “None”, “Front” is disabled.
			Center	Large / [Small] / None
			Surround	Large / [Small] / None
			Surround Back	Large x1 / Large x2 / Small x1 / [Small x2] / None
			Front Presence	[Use] / None
			Subwoofer	[Use] / None [Normal] / Reverse
			Extra Bass	Not Available
			Bass Cross Over	40 / 60 / [80] / 90 / 100 / 110 / 120 / 160 / 200 Hz
		Distance		Meter / Feet
			Front L	0.30 to 24.00 m, [3.00 m], 0.05 m step 1.0 to 80.0 ft, [10.0 ft], 0.2 ft step
			Front R	
			Center	
			Surround L	
			Surround R	
			Surround Back L	
			Surround Back R	
			Front Presence L	
			Front Presence R	
			Subwoofer	
		Level	Front L	-10.0 to +10.0 dB, [0.0 dB], 0.5 dB step
			Front R	
			Center	
			Surround L	
			Surround R	
			Surround Back L	
			Surround Back R	
			Front Presence L	
			Front Presence R	
			Subwoofer	
		Parametric EQ		Manual / YPAO : Flat / YPAO : Front / YPAO : Natural / [Through] * Select “ENTER”
			Front L Front R Center	Band / Gain	▶ Band: #1 to #7 ▲ Gain: -20.0 to +6.0 dB, [0.0 dB], 0.5 dB step
			Surround L Surround R Surround Back L	Frequency / Gain	▶ Frequency: 31.3 Hz to 16.0 kHz, [62.5 Hz] ▲ Gain: -20.0 to +6.0 dB, [0.0 dB], 0.5 dB step
			Surround Back R Front Presence L Front Presence R	Q / Gain	▶ Q: 0.500 to 10.080, [1.000] ▲ Gain: -20.0 to +6.0 dB, [0.0 dB], 0.5 dB step
			PEQ Data Copy		Flat > Manual / Front > Manual / Natural > Manual * Select “ENTER”
			PEQ Data Clear		OK / CANCEL * Select “ENTER”
		Test Tone			[Off] / On
Sound Setup	Lipsync	Delay Enable	HDMI1 / HDMI2 / HDMI3 / HDMI4 / HDMI5 / AV1 / AV2 / AV3 / AV4 / AV5 / AV6 / AUDIO1 / AUDIO2		Disable / [Enable]
		Auto/Manual Select			[Auto] / Manual
		Adjustment			0 to 500 ms, [0 ms], 1 ms step

MAIN MENU	SUB-MENU		PARAMETER		VALUE [INITIAL VALUE]
Sound Setup	Dynamic Range				[Maximum] / Standard / Minimum/Auto
	Max. Volume				-30.0 to +16.5 dB (Maximum volume), [+16.5 dB], 5.0 dB step
	Initial Volume				[Off] / On
			Select “On”		Mute, -80 to +16.5 dB, 0.5 dB step
	Adaptive DSP Level				Off / [On]
Video Setup	Video Mode				[Direct] / Processing
		Select “Processing”	Resolution		Through / [Auto] / 576p / 720p / 1080i / 1080p / 4K * Select “ENTER”
			Aspect		[Through] / 16:9 Normal
HDMI Setup	HDMI Control				[Off] / On
			TV Audio Input		AV1 / AV2 / AV3 / [AV4] / AV5 / AV6 / AUDIO1 / AUDIO2
			ARC (Audio Return Channel)		Off / [On]
			Standby Sync		Off / On / [Auto]
	Audio Output	Amp			Off / [On]
		HDMI OUT (TV)			[Off] / On
	Standby Through				[Off] / On * When HDMI Control is set to “On”, “Standby Through” is disabled.
Network Setup	IP Address	DHCP			[Off] / On
			IP Address		xxx.xxx.xxx. x
			Subnet Mask		xxx.xxx.xxx. x
			Default Gateway		xxx.xxx.xxx. x
			DNS Server (P)	Primary	x. x. x. x
			DNS Server (S)	Secondary	x. x. x. x
	Network Standby				[Off] / On
	MAC Address Filter	Filter			[Off] / On
			MAC Address	1–5 6–10	xx : xx : xx : xx : xx : xx
	Network Name				Input is possible to 15 characters
Multi Zone Setup	Main Zone Set	Zone Rename			Input is possible to 9 characters
	Zone2 Set	Max. Volume			-30.0 to +16.5 dB (Maximum volume), [+16.5 dB], 5.0dB step
		Initial Volume			[Off] / On
			Select “On”		Mute, -80 to +16.5 dB, 0.5 dB step
		Zone Rename			Input is possible to 9 characters
Function Setup	Display Set	Dimmer (Front Display)			-4 to 0
		Short Message			[On] / Off
		Wall Paper			Picture1 / Picture2 / Picture3 / Gray
	Trigger Output	Trigger Mode			[Power] / Source / Manual
			Select “Source”		HDMI1–5, AV1–6, V-AUX, AUDIO1–2, TUNER, AirPlay, SERVER, NET RADIO, USB Low / [High]
		Target Zone			Main / Zone2 / [All]
	Memory Guard				[Off] / On
ECO Setup	Auto Power Down				Off / 2 Hours / 4 Hours / 8 Hours / 12 Hours U, C, R, T, K, A, L, S, H models: [Off] B, G, F models: [8 Hours]
	ECO Mode				[Off] / On
Language Setup					[English (English)] / 日本語 (Japanese) / Français (French) / Deutsch (German) / Español (Spanish) / Русский (Russian) / 中文 (Chinese)

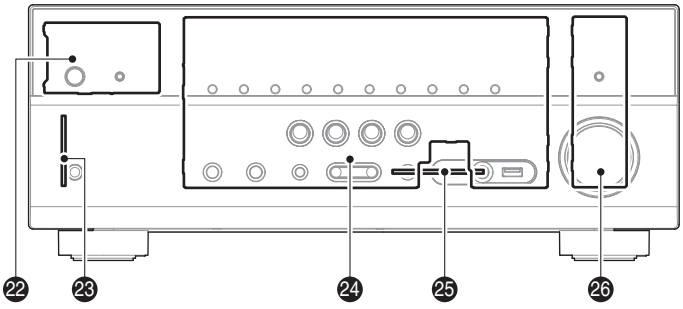
■ INTERNAL VIEW

RX-V673/HTR-6065

Top view



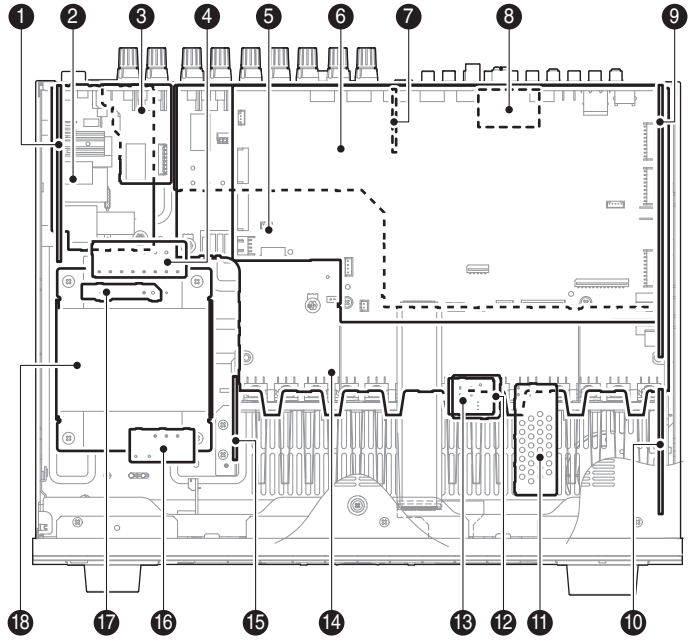
Front view



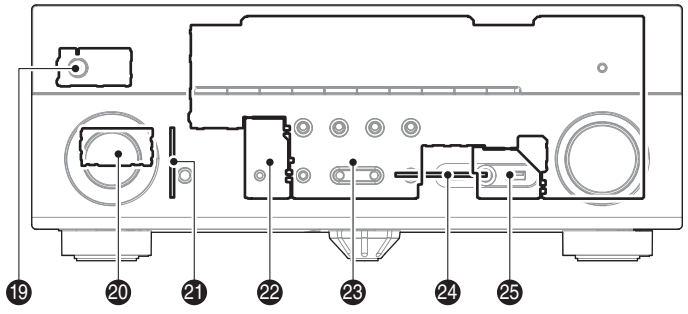
1. VIDEO (2) P.C.B.
2. VIDEO (3) P.C.B.
3. VIDEO (8) P.C.B. (R, S models)
4. OPERATION (8) P.C.B.
5. MAIN (2) P.C.B.
6. DIGITAL (1) P.C.B.
7. VIDEO (1) P.C.B.
8. VIDEO (4) P.C.B.
9. AM/FM TUNER
10. OPERATION (2) P.C.B.
11. OPERATION (12) P.C.B.
12. OPERATION (7) P.C.B.
13. OPERATION (11) P.C.B.
14. OPERATION (9) P.C.B. (U, C models)
15. OPERATION (10) P.C.B. (R, T, K, A, B, G, F, L, S, H models)
16. MAIN (1) P.C.B.
17. MAIN (6) P.C.B.
18. VIDEO (9) P.C.B. (R, S models)
19. VIDEO (7) P.C.B.
20. VIDEO (6) P.C.B. (U, C, T, K, A, B, G, F, L, H models)
21. POWER TRANSFORMER
22. OPERATION (4) P.C.B.
23. OPERATION (3) P.C.B.
24. OPERATION (1) P.C.B.
25. DIGITAL (2) P.C.B.
26. OPERATION (5) P.C.B.

RX-A720

Top view



Front view



❶ VIDEO (2) P.C.B.
❷ VIDEO (3) P.C.B.
❸ OPERATION (8) P.C.B.
❹ MAIN (2) P.C.B.
❺ DIGITAL (1) P.C.B.
❻ VIDEO (1) P.C.B.
❼ VIDEO (4) P.C.B.
❽ AM/FM TUNER
❾ OPERATION (2) P.C.B.
❿ OPERATION (7) P.C.B.
⓫ OPERATION (11) P.C.B.
⓬ OPERATION (9) P.C.B. (U, C models)
⓭ OPERATION (10) P.C.B. (A model)
⓮ MAIN (1) P.C.B.
⓯ MAIN (6) P.C.B.
⓰ VIDEO (7) P.C.B.
⓱ VIDEO (6) P.C.B.
⓲ POWER TRANSFORMER
⓳ OPERATION (5) P.C.B.
⓴ OPERATION (6) P.C.B.
㉑ OPERATION (3) P.C.B.
㉒ OPERATION (4) P.C.B.
㉓ OPERATION (1) P.C.B.
㉔ DIGITAL (2) P.C.B.
㉕ OPERATION (12) P.C.B.

■ SERVICE PRECAUTIONS

Safety measures

- Some internal parts in this product contain high voltages and are dangerous.
  Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there.
  Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity.
  The time required for discharging is about 30 seconds per each.

  C1082–C1085 on MAIN P.C.B.

  C3706 on VIDEO (2) P.C.B.

  For details, refer to “PRINTED CIRCUIT BOARDS”.

■ DISASSEMBLY PROCEDURES

RX-V673/HTR-6065

(Remove parts in the order as numbered.)
Disconnect the power cable from the AC outlet.

1. Removal of Top Cover

a. Remove 4 screws (①) and 5 screws (②). (Fig. 1)
b. Lift the rear of the top cover to remove it. (Fig. 1)

2. Removal of Front Panel Unit

a. Remove 6 screws (③), and remove W4401 and W4421. (Fig. 1)
b. Remove CB8, CB82, CB458, CB472, CB947 and CB952. (Fig. 1)
c. Release 2 hooks, and remove the front panel unit. (Fig. 1)

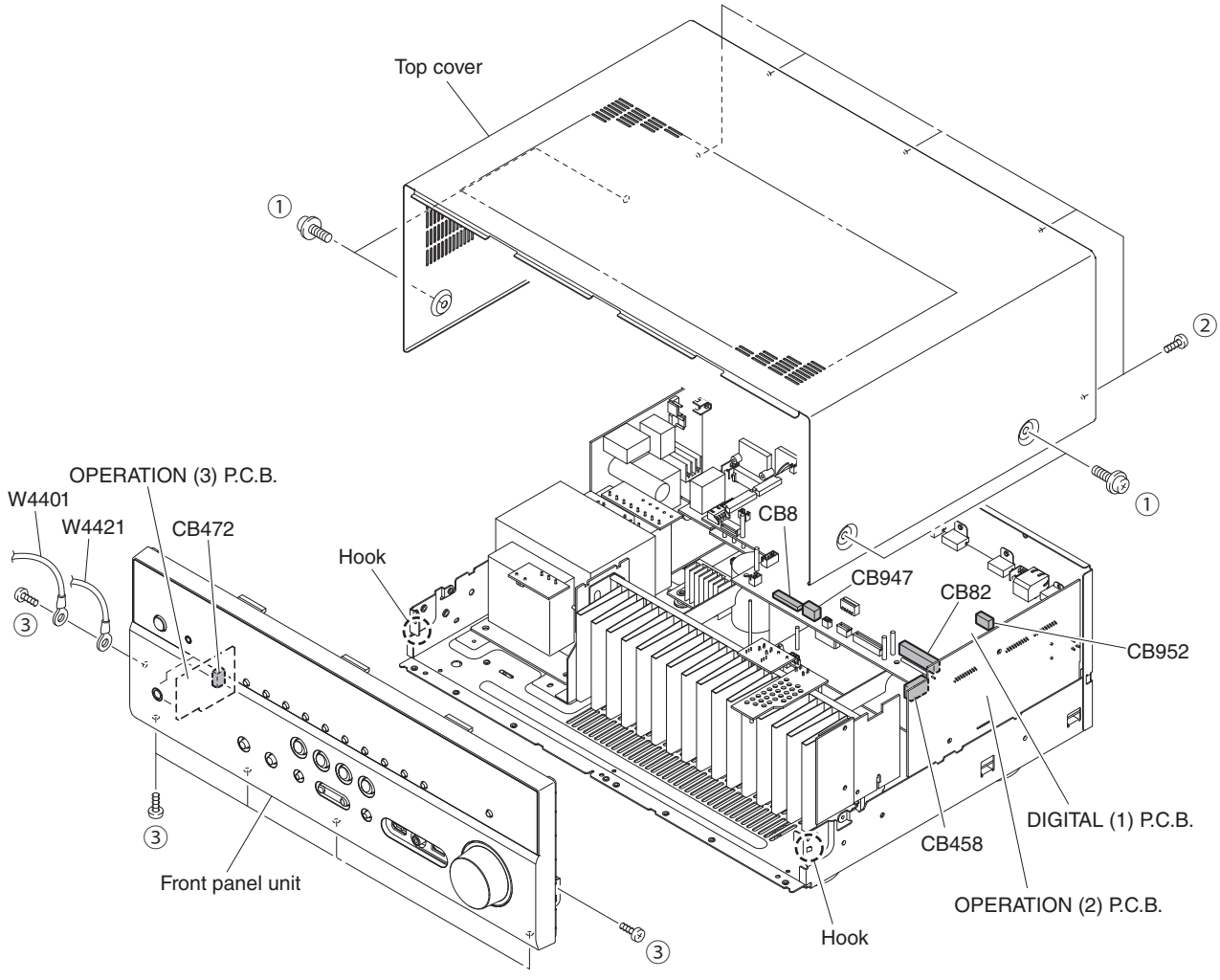


Fig. 1

3. Removal of DIGITAL (1) P.C.B.

a. Remove screw (④) and 7 screws (⑤). (Fig. 3)
b. Remove 3 screws. (⑥). (Fig. 2)
c. Remove CB21, CB76, CB81 and CB942. (Fig. 2)
d. Unlock and remove CB78, CB79 and CB944. (Fig. 2)
e. Remove the DIGITAL (1) P.C.B. which is connected directly to the OPERATION (2) P.C.B. with board-to-board connectors. (Fig. 2)

4. Removal of AMP Unit and Power Transformer

a. Remove screw (⑦), 3 screws (⑧), 3 screws (⑨) and 4 screws (⑩). (Fig. 2)
b. Remove 3 screws (⑪). (Fig. 3)
c. Remove the AMP unit together with the power transformer. (Fig. 2)

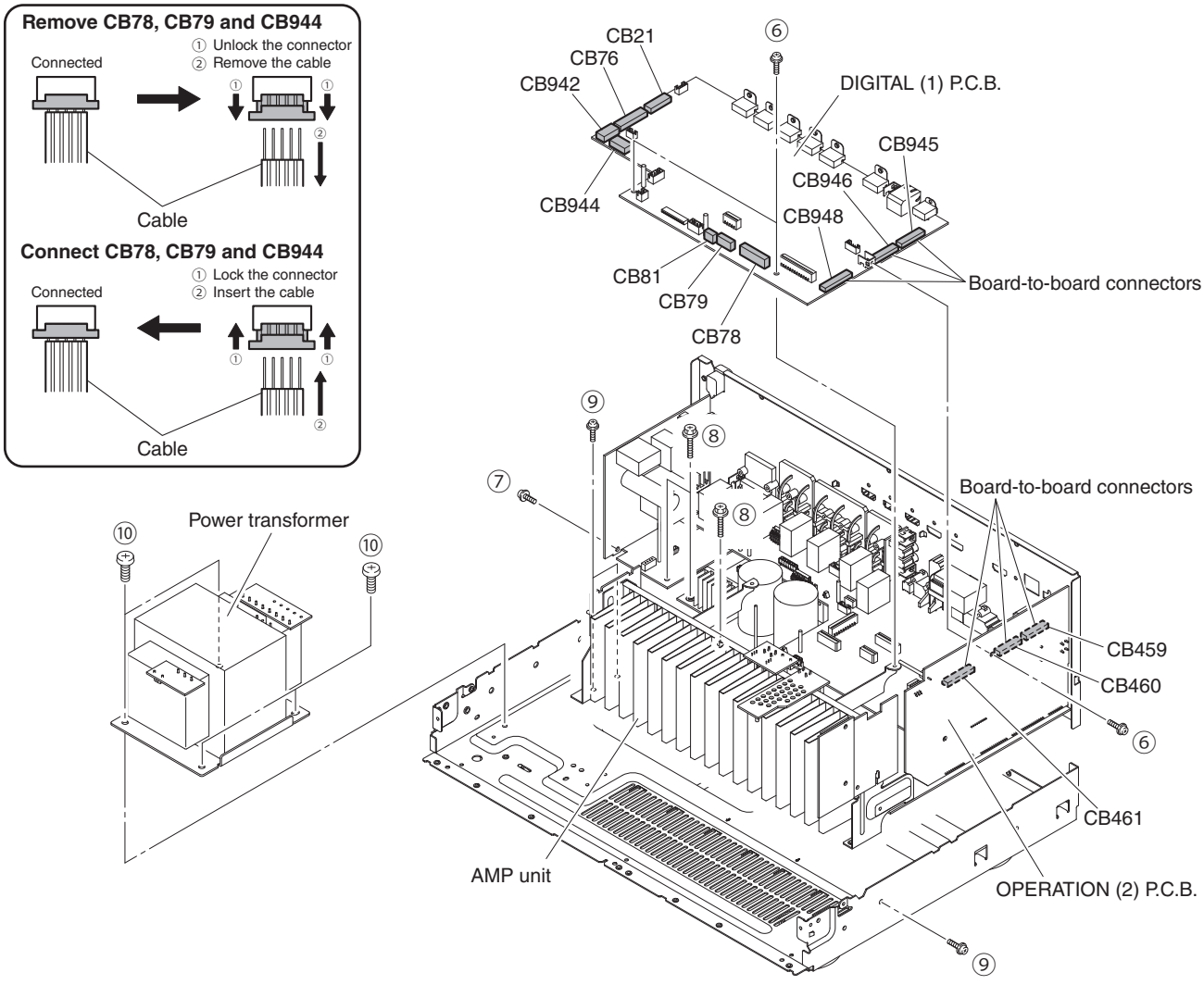


Fig. 2

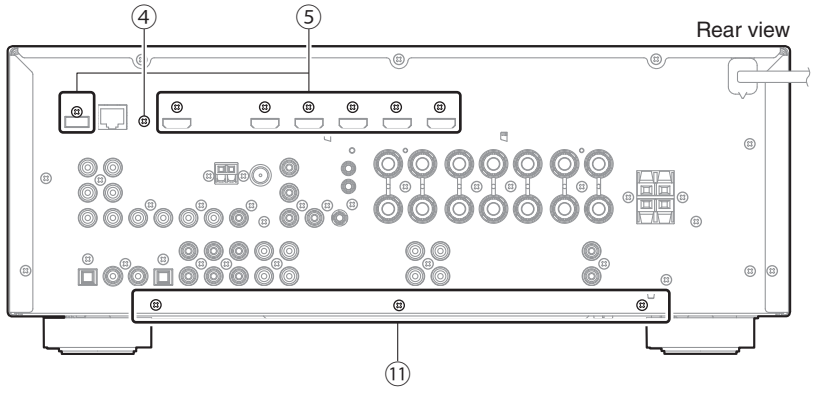


Fig. 3

When checking the P.C.B.s:

- Place the P.C.B.s (with rear panel) upright. (Fig. 4)
- Connect the heatsink and rear panel to the chassis with a ground lead. (Fig. 4)
- Reconnect all cables (connectors) that have been disconnected.
- When connecting the flexible flat cable, be careful with polarity.

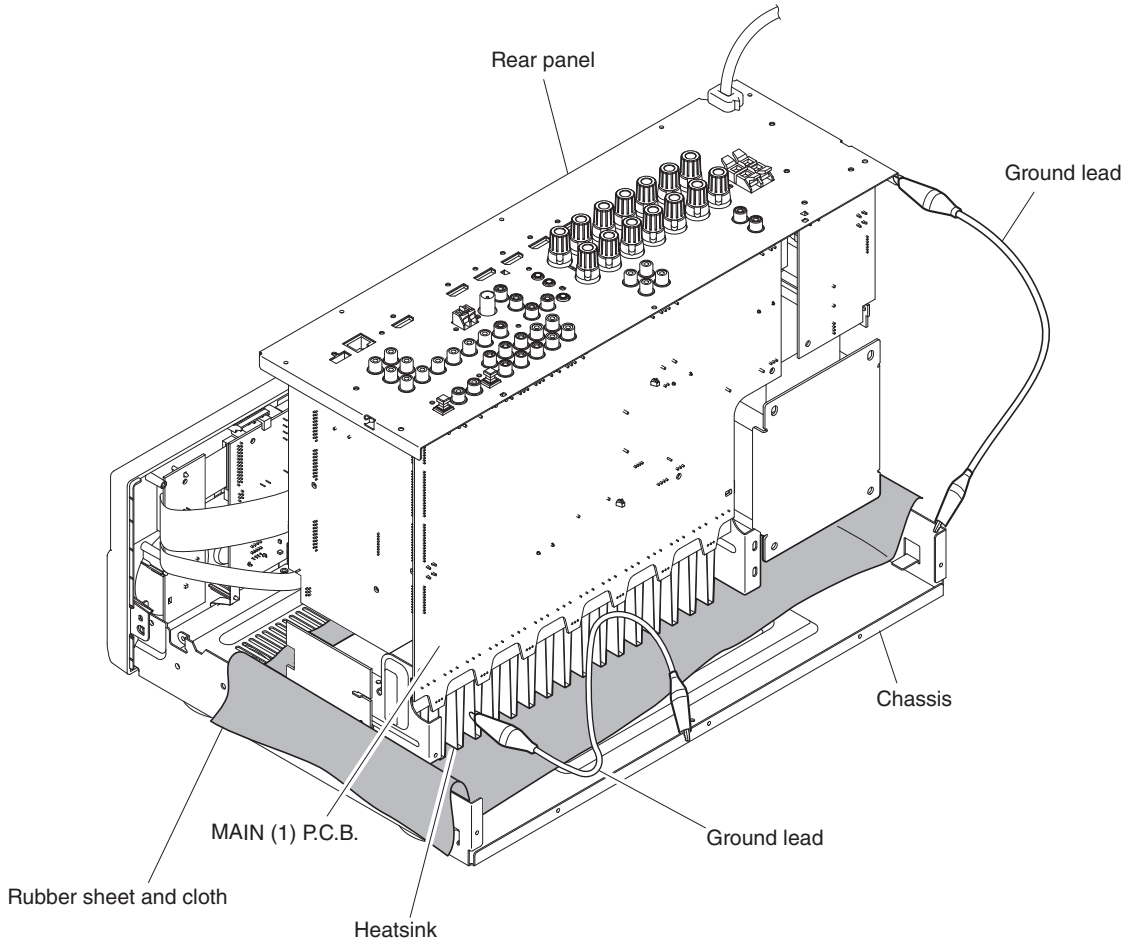


Fig. 4

RX-A720

(Remove parts in the order as numbered.)
Disconnect the power cable from the AC outlet.

1. Removal of Top Cover

a. Remove 4 screws (①), 5 screws (②) and screw (③). (Fig. 1)
b. Lift the rear of the top cover to remove it. (Fig. 1)

2. Removal of Front Panel Unit and Sub-Chassis Unit

a. Remove knob (INPUT) and knob (VOLUME). (Fig. 1)
b. Remove 6 screws (④) and then remove the front panel unit. (Fig. 1)
c. Remove 2 push rivets and then remove the side plate (L) and side plate (R). (Fig. 1)
d. Remove CB8, CB82, CB458, CB471, CB947 and CB952. (Fig. 1)
e. Remove 2 screws (⑤) and then remove the sub-chassis unit. (Fig. 1)

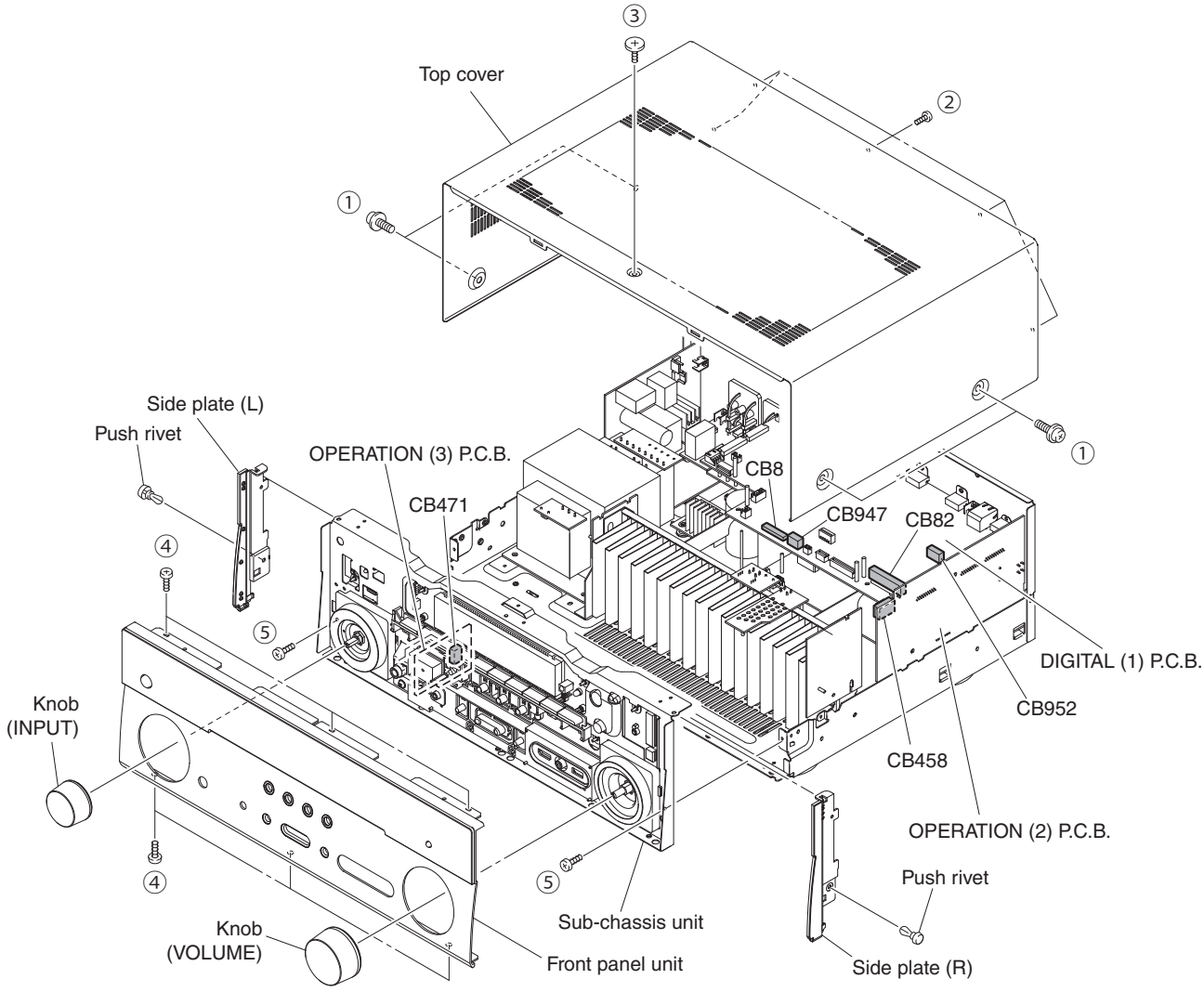


Fig. 1

3. Removal of DIGITAL (1) P.C.B.

a. Remove screw (⑥) and 7 screws (⑦). (Fig. 3)
b. Remove 3 screws. (⑧). (Fig. 2)
c. Remove CB21, CB76, CB81 and CB942. (Fig. 2)
d. Unlock and remove CB78, CB79 and CB944. (Fig. 2)
e. Remove the DIGITAL (1) P.C.B. which is connected directly to the OPERATION (2) P.C.B. with board-to-board connectors. (Fig. 2)

4. Removal of AMP Unit and Power Transformer

a. Remove screw (⑨), 3 screws (⑩), 3 screws (⑪) and 4 screws (⑫). (Fig. 2)
b. Remove 3 screws (⑬). (Fig. 3)
c. Remove the AMP unit together with the power transformer. (Fig. 2)

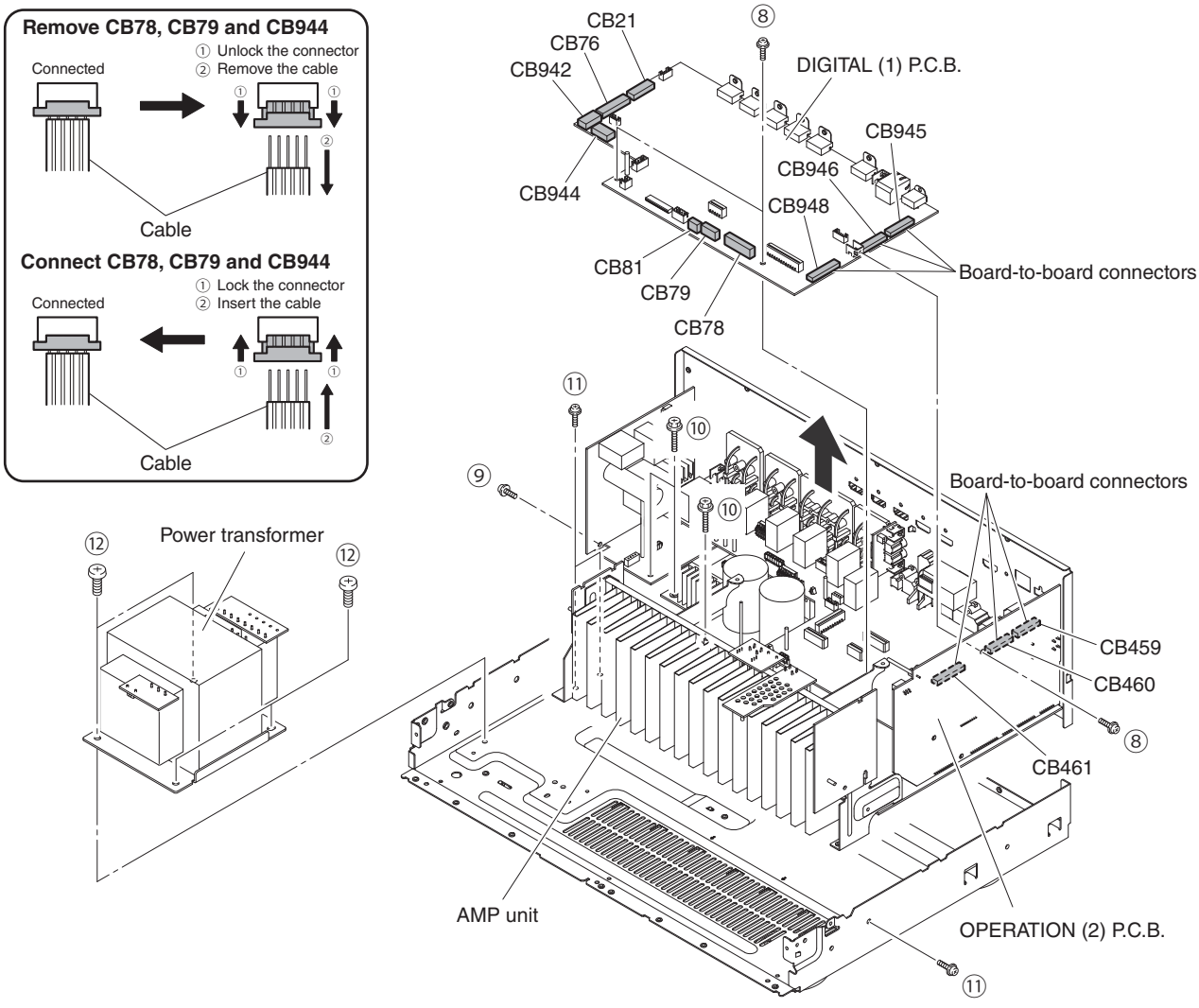


Fig. 2

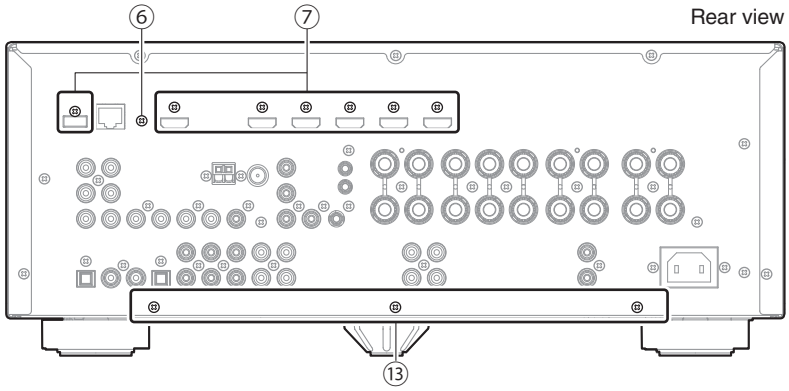


Fig. 3

When checking the P.C.B.s:

- Place the P.C.B.s (with rear panel) upright. (Fig. 4)
- Connect the heatsink and rear panel to the chassis with a ground lead. (Fig. 4)
- Reconnect all cables (connectors) that have been disconnected.
- When connecting the flexible flat cable, be careful with polarity.

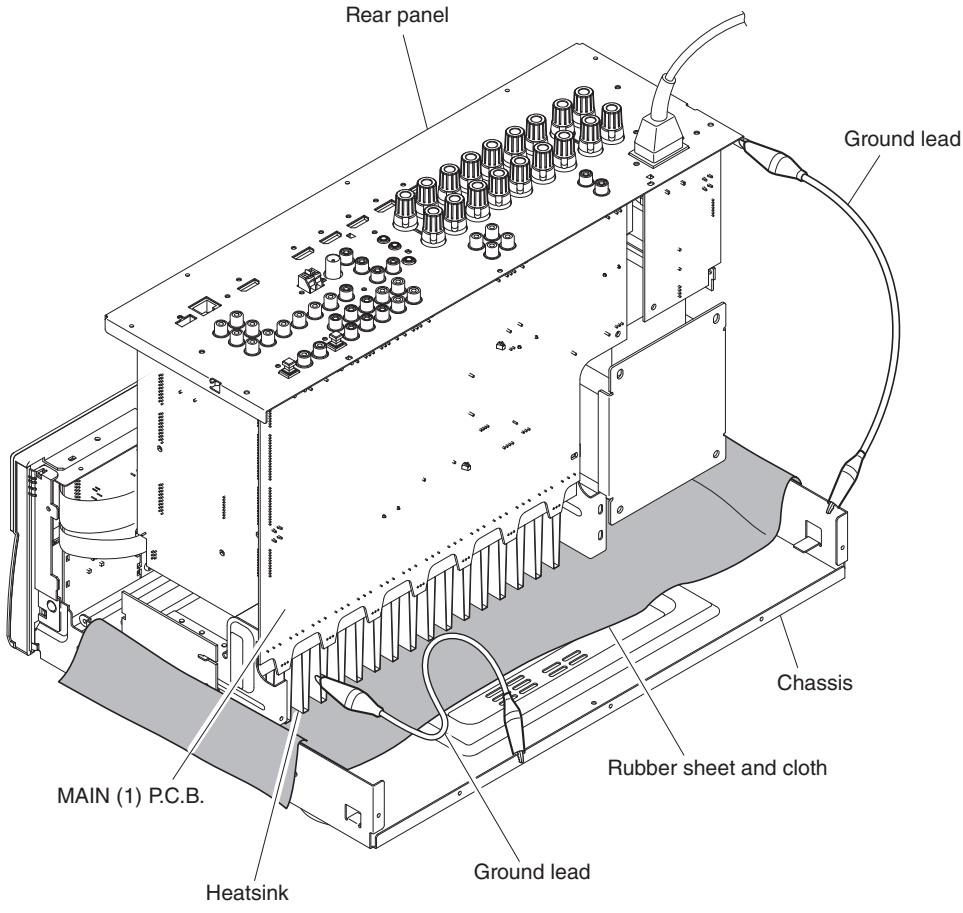


Fig. 4

■ UPDATING FIRMWARE

When the following parts are replaced, the firmware must be updated to the latest version.

DIGITAL P.C.B.

FPGA Flash ROM: IC77 on DIGITAL P.C.B.

DSP(TI) Flash ROM: IC923 on DIGITAL P.C.B.

NETWORK Flash ROM: IC953 on DIGITAL P.C.B.

● Confirmation of firmware version and checksum

Before and after updating the firmware, check the firmware version and checksum by using the self-diagnostic function menu.

Start up the self-diagnostic function and select “S4. ROM VERSION/CHECKSUM” menu.

Using the sub-menu, have the firmware version and checksum displayed, and note them down.
(See “SELF-DIAGNOSTIC FUNCTION”)

* When the firmware version is different from written one after updating, perform the updating procedure again from the beginning again.

● Initializing the back-up IC (EEPROM: IC82 on DIGITAL P.C.B.)

After updating the firmware, the back-up IC MUST be initialized by the following procedure to store the setting information (soundfield parameters, system memory and tuner presetting, etc.) properly.

Start up the self-diagnostic function and select “S3. FACTORY PRESET” menu. (See “SELF-DIAGNOSTIC FUNCTION”)

Select “PRESET RSRV”, press the “MAIN ZONE ⏻” key to turn off the power once and turn on the power again. Then the back-up IC is initialized.

● Required Tools

- USB storage device
- Firmware
  RX-V673/HTR-6065/RX-A720: R0309-xxxx.bin

● Preparation

1. Download the latest firmware from the specified download source to the folder of the PC.
2. Copy the latest firmware from the PC to the root folder of the USB storage device.

Note) When the latest firmware is copied to a sub-folder of the USB storage device, the update will not proceed.

● Operation Procedures

1. Insert the USB storage device to the USB jack. (Fig. 1)
2. While pressing the “PURE DIRECT” key, connect the power cable to the AC outlet. (Fig. 1)

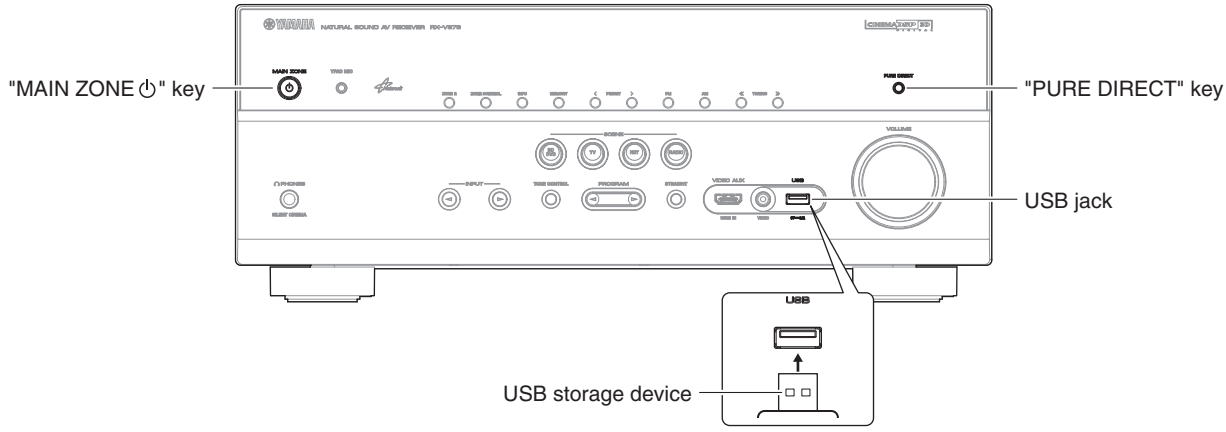


Fig. 1

3. The USB UPDATE mode is activated and “USB UPDATE” is displayed. Writing of the firmware starts automatically. (Fig. 2)

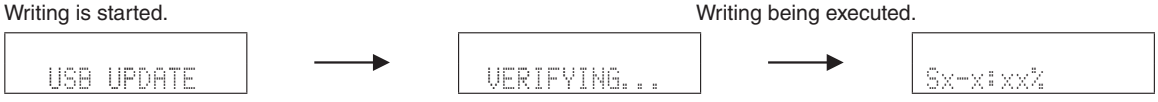


Fig. 2

4. When writing of the firmware is completed, “UPDATE SUCCESS”, “PLEASE...” and “POWER OFF!” are displayed repeatedly. (Fig. 3)

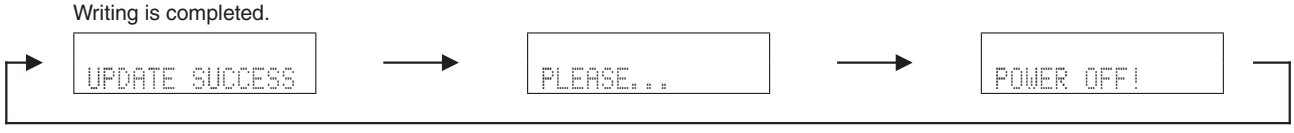


Fig. 2

5. Press the “MAIN ZONE ⏻” key to turn off the power. (Fig. 1)
6. Remove the USB storage device from the USB jack. (Fig. 1)
7. Start up the self-diagnostic function and check that the firmware version and checksum are the same as written ones. (See “Confirmation of firmware version and checksum”)

■ SELF-DIAGNOSTIC FUNCTION

This unit has self-diagnostic functions that are intended for inspection, measurement and location of faulty point.

There are 22 main menu items, each of which has sub-menu items.

Listed in the table below are main menu items and sub-menu items.

Note: Some of the menu items listed below may not apply to the models covered in this service manual.

No.	Main menu	No.	Sub-menu
A: Audio system			
A1	DSP AUDIO	1	DSP MARGIN
		2	DSP NON MARGIN
		3	INVALID ITEM (Not for service)
		4	DSP FULL CENTER
		5	DSP FULL SURROUND
		6	DSP FULL SURROUND BACK
		7	DSP FULL SUBWOOFER
A2	DIRECT AUDIO	1	ANALOG DIRECT VH
		2	ANALOG DIRECT VL
A3	HDMI AUDIO	1	HDMI AUTO
		2	INVALID ITEM (Not for service)
		3	ARC1
		4	INVALID ITEM (Not for service)
		5	INVALID ITEM (Not for service)
A4	SPEAKERS SET	1	BI-AMP
		2	ZONE/TONE=MAX
		3	ZONE/TONE=MIN
		4	INVALID ITEM (Not for service)
		5	INVALID ITEM (Not for service)
		6	D-PARTY MODE
		7	FULL MUTE
		8	INVALID ITEM (Not for service)
		9	INVALID ITEM (Not for service)
		10	INVALID ITEM (Not for service)
A5	MULTI CHANNEL INPUT (Not for service)	1	MULTI CHANNEL INPUT 8 ohms
		2	MULTI CHANNEL INPUT 6 ohms
A6	MIC CHECK	1	MIC ROUTE CHECK
A7	MANUAL TEST	1	TEST ALL
		2	TEST FRONT L
		3	TEST CENTER
		4	TEST FRONT R
		5	TEST SURROUND R
		6	TEST SURROUND BACK R
		7	TEST SURROUND BACK L
		8	TEST SURROUND L
		9	TEST FRONT PRESENCE L
		10	TEST FRONT PRESENCE R
		11	INVALID ITEM (Not for service)
		12	INVALID ITEM (Not for service)
		13	TEST LFE 1
		14	INVALID ITEM (Not for service)

No.	Main menu	No.	Sub-menu	
D: Display system				
D1	FL CHECK	1	FL CHECK	
		2	ALL SEGMENT OFF	
		3	ALL SEGMENT ON	
		4	CHECK PATTERN 1	
		5	CHECK PATTERN 2	
Z: Zone system				
Z1	ZONE TEST	1	AV1	(Not for service)
		2	AV2	(Not for service)
		3	AV3	(Not for service)
		4	AV4	(Not for service)
		5	AV5	
		6	AV6	
		7	AUDIO1	
		8	AUDIO2	
		9	V-AUX	(Not for service)
		10	PHONO	(Not for service)
U: Universal system				
U1	USB	1	USB FRONT 1 TRACK	
		2	USB FRONT 2 TRACK	
		3	USB_VBUS HIGH POWER	
N: Network system				
N1	NETWORK	1	IP ADDRESS CHECK	
		2	MAC ADDRESS CHECK	
		3	LINE NOISE 100 MDI	(Not for service)
		4	LINE NOISE 100 MDIX	(Not for service)
		5	LINE NOISE 10 MDI	(Not for service)
		6	LINE NOISE 10 MDIX	(Not for service)
		7	EXT TEST	
		8	MAC ADDRESS	
C: Communication system				
C1	DIGITAL PCB CHECK	1	ALL	
		2	BUS FLASH ROM	
		3	BUS FPGA	
		4	I2C	
		5	FPGA RAM	
		6	BUS DIR1	
		7	BUS DSP1	
		8	EEPROM	
		9	INVALID ITEM	(Not for service)
		10	INVALID ITEM	(Not for service)
		11	INVALID ITEM	(Not for service)
C2	NETWORK IC CHECK	1	ALL	
		2	LINK CHECK	
		3	PHY TEST	
		4	BUS RAM	
		5	APL ID CHECK	

No.	Main menu	No.	Sub-menu
V: Video system			
V1	ANALOG VIDEO CHECK	1	ANALOG BYPASS
		2	INVALID ITEM (Not for service)
		3	INVALID ITEM (Not for service)
		4	MUTE CHECK
		5	TEST PATTERN (Not for service)
		6	VIDEO IN
V2	DIGITAL VIDEO CHECK	1	LOOPBACK TEST 1
		2	LOOPBACK TEST 2
		3	LOOPBACK TEST 3
		4	INVALID ITEM (Not for service)
		5	INVALID ITEM (Not for service)
		6	INVALID ITEM (Not for service)
		7	HDMI REPEAT
		8	DIGITAL CVBS
		9	INVALID ITEM (Not for service)
		10	DIGITAL COMPONENT
		11	DIGITAL COMPONENT SC
		12	GUI-VIDEO OUT
V3	TEST PATTERN	1	480i
		2	480p
		3	720p 60Hz
		4	1080i 60Hz
		5	1080p 60Hz
		6	576i
		7	576p
		8	720p 50Hz
		9	1080i 50Hz
		10	1080p 50Hz
		11	1080p 24Hz
		12	1080p 24Hz 3D/FP
		13	720p 60Hz 3D/FP
		14	720p 50Hz 3D/FP
		15	1080i 60Hz 3D/FP
		16	1080i 60Hz 3D/SS
		17	1080i 50Hz 3D/SS
		18	720p 60Hz 3D/TB
		19	720p 50Hz 3D/TB
		20	1080p 24Hz 3D/TB
		21	4k 24Hz

No.	Main menu	No.	Sub-menu
P: Power and protection system			
P1	SYSTEM MONITOR	1	DC
		2	PS1/PS2/PS3
		3	THM
		4	INVALID ITEM (Not for service)
		5	OUTPUT LEVEL
		6	LIMITER CONTROL
		7	L3 (J model) (Not for service)
		8	KEY1/KEY2
		9	USB-VBUS (Not for service)
P2	PROTECTION HISTORY	1	HISTORY 1
		2	HISTORY 2
		3	HISTORY 3
		4	HISTORY 4
S: System and version system			
S1	FIRMWARE UPDATE	1	FIRMWARE UPDATE (Not for service)
S2	SET INFORMATION	1	MODEL
		2	DESTINATION
		3	DEBUG (Not for service)
		4	NET RESTART COUNTER (Not for service)
S3	FACTORY PRESET	1	PRESET INHIBIT/RESERVE
S4	ROM VERSION/CHECKSUM	1	SYSTEM VERSION
		2	MICROPROCESSOR VERSION
		3	MICROPROCESSOR CHECKSUM
		4	FLASH ROM VERSION
		5	FLASH ROM CHECKSUM
		6	NETWORK MICROPROCESSOR VERSION
		7	NETWORK MICROPROCESSOR CHECKSUM
		8	DSP1 VERSION
		9	DSP1 CHECKSUM
		10	INVALID ITEM (Not for service)
		11	INVALID ITEM (Not for service)
		12	GUI VERSION
		13	FPGA GUI VERSION
		14	FPGA SD VERSION
		15	FPGA HD VERSION
		16	INVALID ITEM (Not for service)
		17	INVALID ITEM (Not for service)

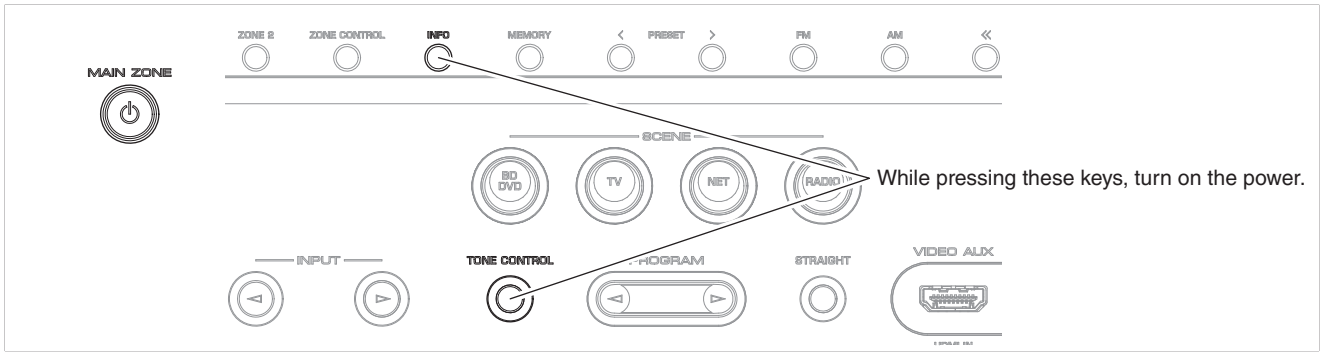
● Starting Self-Diagnostic Function

While pressing the “TONE CONTROL” and “INFO” keys, press the “MAIN ZONE ⏻” key to turn on the power, and release those 2 keys.

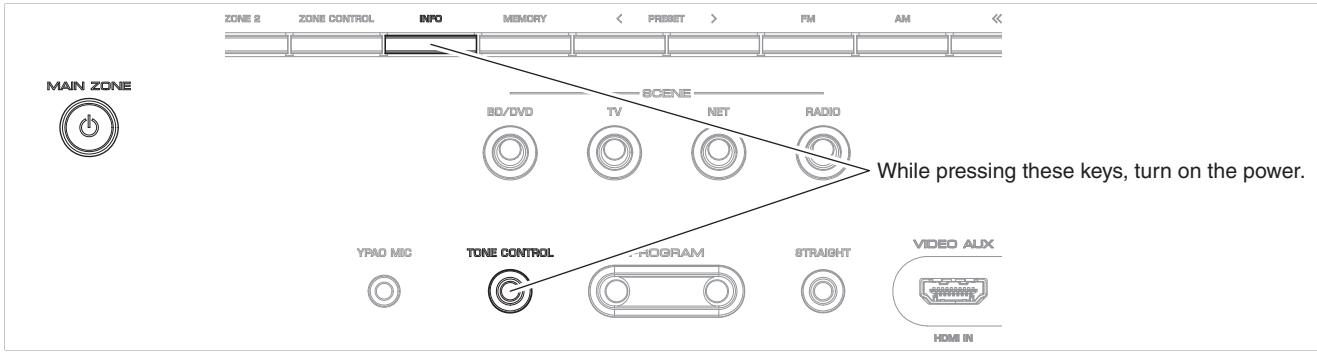
The self-diagnostic function mode is activated.

Keys of this unit

RX-V673/HTR-6065



RX-A720



● Starting Self-Diagnostic Function in the protection cancel mode

If the protection function works and causes hindrance to troubleshooting, cancel the protection function by the procedure below, and it will be possible to enter the self-diagnostic function mode. (The protection functions other than the excess current detect function will be disabled.)

While pressing the “TONE CONTROL” and “INFO” keys, press the “MAIN ZONE ⏻” key to turn on the power and keep pressing those 2 keys and “MAIN ZONE ⏻” key for 3 seconds or longer.

The self-diagnostic function mode is activated with the protection functions disabled.

In this mode, the “SLEEP” segment of the FL display flashes to indicate that the mode is self-diagnostic function mode with the protection functions disabled.

CAUTION!

Using this unit with the protection function disabled may cause further damage to this unit. Use special care for this point when using this mode.

● Canceling Self-Diagnostic Function

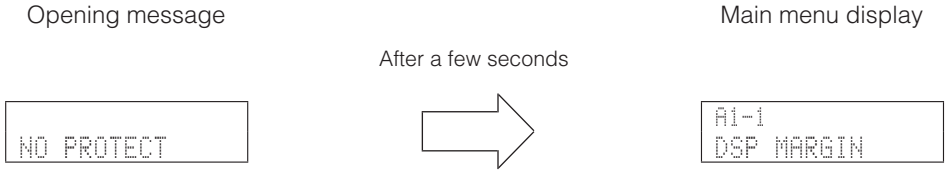
1. Before canceling self-diagnostic function, execute setting for “S3. FACTORY PRESET” menu. (Memory initialization inhibited or Memory initialized).
   * In order to keep the user memory preserved, be sure to select PRESET INHIBIT (Memory initialization inhibited).
2. Press the “MAIN ZONE ⏻” key to turn off the power.

● Display provided when Self-Diagnostic Function started

The display is as described below depending on the situation when the power to this unit is turned off.

1. When the power is turned off by usual operation:

“NO PROTECT” is displayed. Then “A1-1. DSP MARGIN” is displayed in a few seconds.



2. When the protection function worked to turn off the power:

The information of protection function which worked at that time is displayed. Then “A1-1. DSP MARGIN” is displayed in a few seconds.

Note: At that time if you restart the self-diagnostic function after turning off the power once, “NO PROTECT” will be displayed. That is because that situation is equal to “1. When the power is turned off by usual operation:”.

However history of the protection function is stored in memory as backup data. For details, refer to “P2. PROTECTION HISTORY” menu.

2-1. When there is a history of protection function due to excess current.

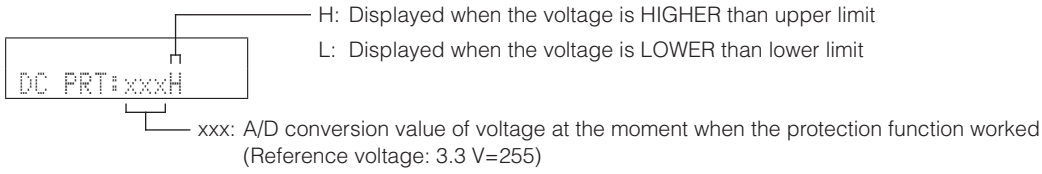
Cause: An excessive current flowed through the power amplifier.
Supplementary information: As over current of the power amplifier is detected, check condition of each power transistor.

Turning on the power without correcting the abnormality will cause the protection function to work immediately and the power supply will instantly be shut off.

Notes:

- **Applying the power to this unit without correcting the abnormality can be dangerous and cause additional circuit damage. To avoid this, if “I PROTECT” protection function works 1 time, the power will not turn on even when the “MAIN ZONE ⏻” key is pressed. In order to turn on the power again, start up the self-diagnostic function.**
- **The output transistors in each amplifier channel should be checked for damage before applying power to this unit.**
- **Amplifier current should be monitored by measuring DC voltage across the emitter resistors for each channel.**

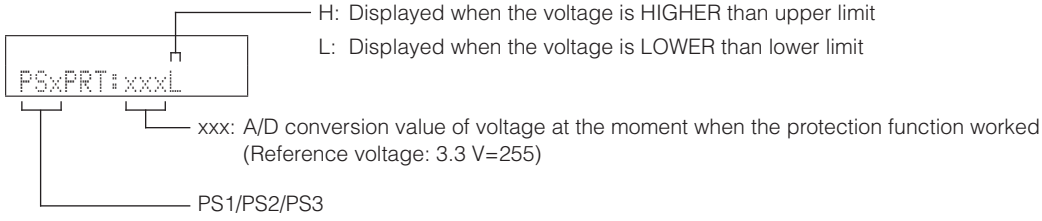
2-2. When the protection function worked due to abnormal DC output.



Cause: DC output of the power amplifier is abnormal.
Supplementary information: The protection function worked due to a DC voltage appearing at the speaker terminal. A cause could be a defect in the amplifier.

Turning on the power without correcting the abnormality will cause the protection function to work in 5 seconds and the power supply will be shut off.

2-3. When the protection function worked due to abnormal voltage in the power supply section.



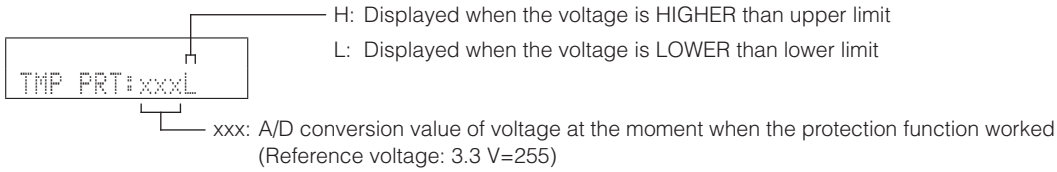
Cause: The voltage in the power supply section is abnormal.
Supplementary information: The protection function worked due to a defect or overload in the power supply.

Turning on the power without correcting the abnormality will cause the protection function to work in 1 seconds and the power supply will be shut off.

Notes:

- **Applying the power to this unit without correcting the abnormality can be dangerous and cause additional circuit damage. To avoid this, if "PS" and "DC" protection function works 3 times consecutively, the power will not turn on even when the "MAIN ZONE ⏻" key is pressed. In order to turn on the power again, start up the self-diagnostic function.**
- **The output transistors in each amplifier channel should be checked for damage before applying power to this unit.**
- **Amplifier current should be monitored by measuring DC voltage across the emitter resistors for each channel.**

2-4. When the protection function worked due to excessive heatsink temperature.



Cause: The temperature of the heatsink is excessive.
Supplementary information: The protection function worked due to the temperature limit being exceeded. Causes could be poor ventilation or a defect related to the thermal sensor.

Turning on the power without correcting the abnormality will cause the protection function to work in 1 seconds and the power supply will be shut off.

● **History of protection function**

When the protection function has worked, its history is stored in memory as backup data.

Even if no abnormality is noted while servicing the unit, an abnormality which has occurred previously can be defined as long as the backup data has been stored.

For details, refer to “P2. PROTECTION HISTORY” menu.

● Operation procedure of Main menu and Sub-menu

There are 22 main menu items, each of which has sub-menu items.

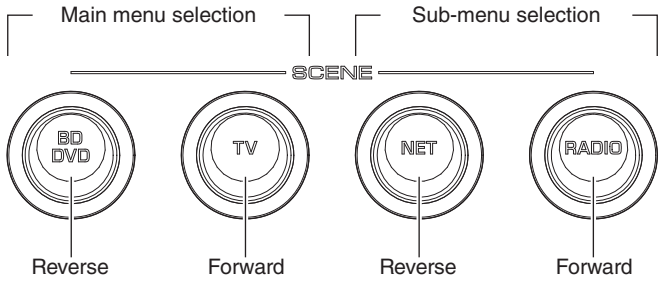
Main menu selection

Select the main menu using “SCENE TV” (forward) and “SCENE BD/DVD” (reverse) keys.

Sub-menu selection

Select the sub-menu using “SCENE RADIO” (forward) and “SCENE NET” (reverse) keys.

Keys of this unit



● Functions in Self-Diagnostic Function mode

In addition to the self-diagnostic function menu items, functions listed below are available.

- Power ON/OFF
- Master volume
- Muting
- Input selection
- Zone control

* Functions related to the tuner and the set menu are not available.

● Initial settings when Self-Diagnostic Function started

The following initial settings are used when self-diagnostic function is started.

- Master volume: -20 dB / Zone volume: +2.5dB
- Input: HDMI1 / Zone input: AUDIO1
- Main menu: A1-1. DSP MARGIN
- Speaker setting: LARGE, Bass out to SWFR (All channels)
- HDMI Control: Off
- Zone 2: On

* When self-diagnostic function is canceled, these settings are restored to those before starting self-diagnostic function.

● Details of Self-Diagnostic Function menu

A1. DSP AUDIO

This menu is used to check audio signal route via DSP.

A1-1. DSP MARGIN

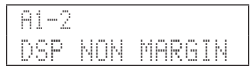
The audio signal is output including the head margin via DSP.

* When input source is stereo, signal is assigned as below.

Front L:	Front L, Center, Surround L, Surround Back L
Front R:	Front R, Surround R, Surround Back R
Front L +10 dB:	Subwoofer

A1-2. DSP NON MARGIN

The SUBWOOFER signal is output including the head margin via DSP.
The audio signal other than SUBWOOFER is output without including the head margin via DSP.



A1-3. INVALID ITEM

Not for service.

A1-4. DSP FULL CENTER

The audio signal is output to only CENTER channel in digital full bit without including the head margin.

A1-5. DSP FULL SURROUND

The audio signal is output to only SURROUND L/R channels in digital full bit without including the head margin.

A1-6. DSP FULL SURROUND BACK

The audio signal is output to only SURROUND BACK L/R channel in digital full bit without including the head margin.

A1-7. DSP FULL SUBWOOFER

The audio signal is output to only SUBWOOFER channel in digital full bit without including the head margin.

A2. DIRECT AUDIO

This menu is used to check audio signal route of PURE DIRECT mode.

A2-1. DIRECT VH

The analog input audio signal is output to FRONT L/R in PURE DIRECT mode.

VH: Voltage High, RY101 on MAIN P.C.B.: Off

A2-2. DIRECT VL

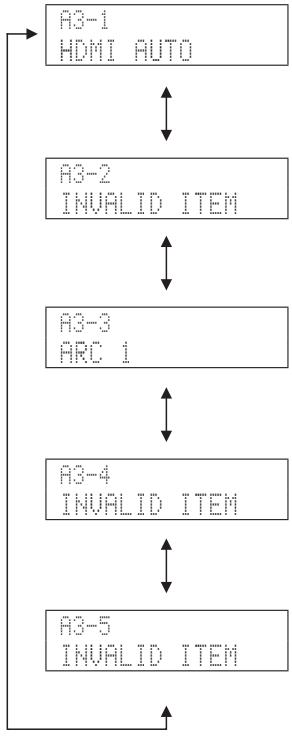
The analog input audio signal is output to FRONT L/R in PURE DIRECT mode.

VL: Voltage Low, RY101 on MAIN P.C.B.: On

A3. HDMI AUDIO

This menu is used to check the route of audio signal input to HDMI IN/OUT jack.

* Before check using “A3-3. ARC 1” menu, be sure to connect a TV monitor equipped with Audio Return Channel function to this unit in advance.



A3-1. HDMI AUTO

The audio signal input to selected HDMI IN jack is output.

A3-2. INVALID ITEM

Not for service.

A3-3. ARC 1 (Audio Return Channel function)

The audio signal input to HDMI OUT jack is output.

A3-4. INVALID ITEM

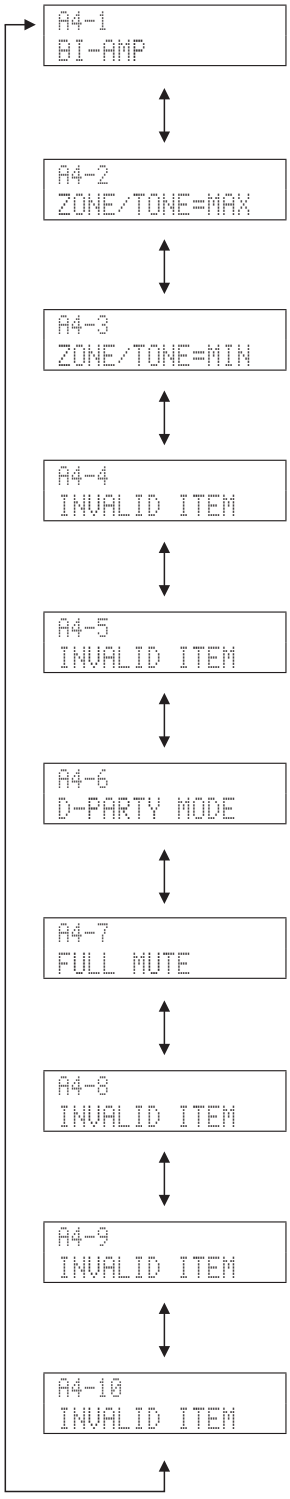
Not for service.

A3-5. INVALID ITEM

Not for service.

A4. SPEAKERS SET

This menu is used to check the speaker output.



A4-1. BI-AMP

The FRONT L/R signal is distributed to SURROUND BACK L/R terminals.

A4-2. ZONE/TONE=MAX

The audio signal is output to FRONT L/R, CENTER and SURROUND L/R terminals with the tone control "BASS +6 dB", "TREBLE +6 dB".

A4-3. ZONE/TONE=MIN

The audio signal is output to FRONT L/R, CENTER and SURROUND L/R terminals with the tone control "BASS -6 dB", "TREBLE -6 dB".

A4-4. INVALID ITEM

Not for service.

A4-5. INVALID ITEM

Not for service.

A4-6. D-PARTY MODE

The FRONT L/R signal is distributed to ZONE2 L/R terminals.

ZONE2 volume: -3.5 dB

A4-7. FULL MUTE

The audio signals are muted at all channels.

A4-8. INVALID ITEM

Not for service.

A4-9. INVALID ITEM

Not for service.

A4-10. INVALID ITEM

Not for service.

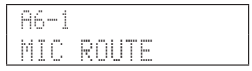
A5. MULTI CHANNEL INPUT

Not for service.

A6. MIC CHECK

A6-1. MIC ROUTE CHECK

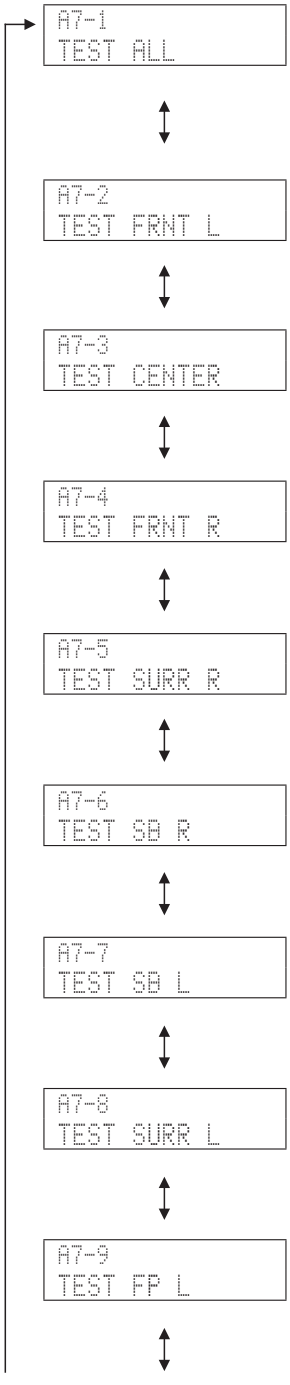
The audio signal input to the YPAO MIC jack is output to FRONT L and FRONT R channels via A/D-D/A.



A7. MANUAL TEST

The test noise generated by built-in noise generator in DSP is output to the channels specified by the sub-menu.

	Test noise	Test tone
for SUBWOOFER	30 Hz to 80 Hz pink noise	50 Hz sine wave
for other than SUBWOOFER	500 Hz to 2 kHz pink noise	1 kHz sine wave



A7-1. TEST ALL

The test noise is output to FRONT L/R, CENTER, SURROUND L/R, SURROUND BACK L/R and LFE 1 channels.

A7-2. TEST FRONT L

The test tone is output to FRONT L channel.

A7-3. TEST CENTER

The test tone is output to CENTER channel.

A7-4. TEST FRONT R

The test tone is output to FRONT R channel.

A7-5. TEST SURROUND R

The test tone is output to SURROUND R channel.

A7-6. TEST SURROUND BACK R

The test tone is output to SURROUND BACK R channel.

A7-7. TEST SURROUND BACK L

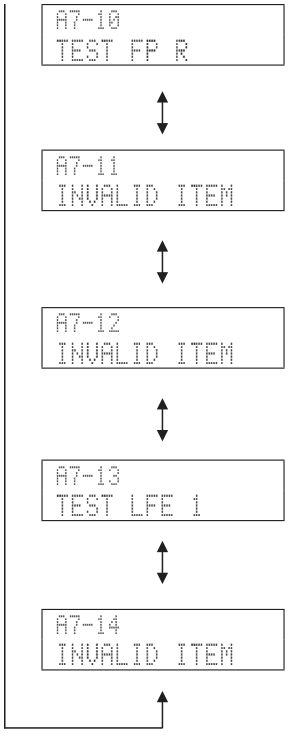
The test tone is output to SURROUND BACK L channel.

A7-8. TEST SURROUND L

The test tone is output to SURROUND L channel.

A7-9. TEST FRONT PRESENCE L

The test tone is output to FRONT PRESENCE L channel.



A7-10. TEST FRONT PRESENCE R

The test tone is output to FRONT PRESENCE R channel.

A7-11. INVALID ITEM

Not for service.

A7-12. INVALID ITEM

Not for service.

A7-13. TEST LFE 1 (SUBWOOFER)

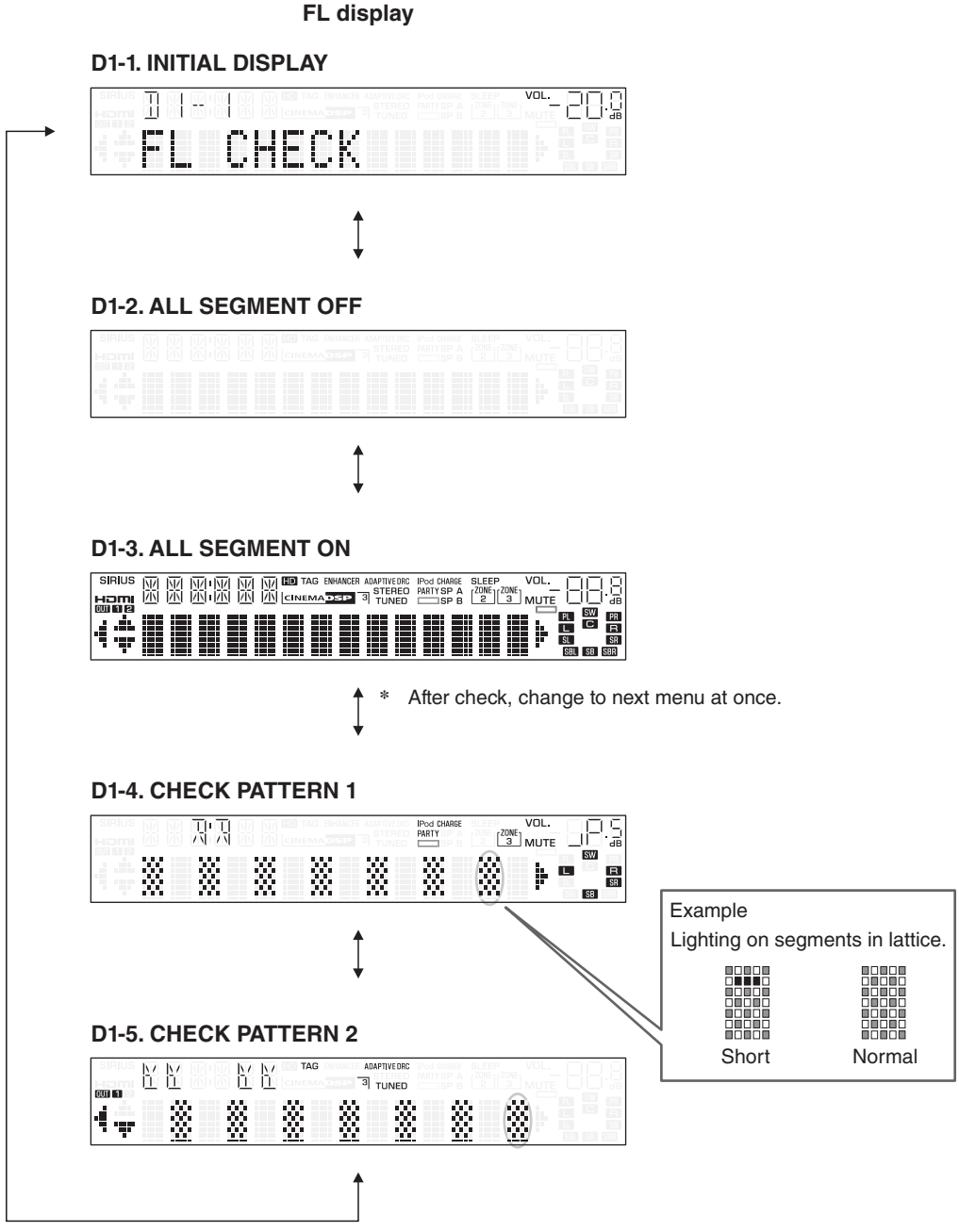
The test tone is output to LFE 1 channel.

A7-14. INVALID ITEM

Not for service.

D1. FL CHECK

This menu is used to check operation of the FL display.



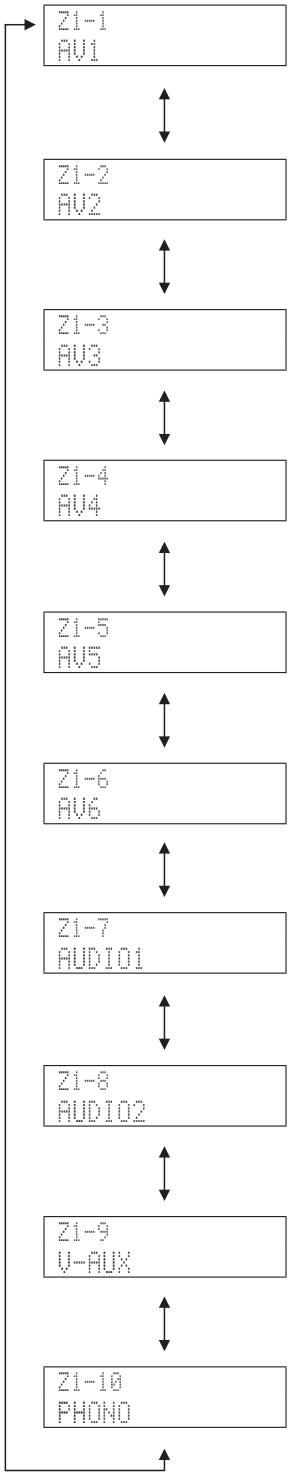
Segment conditions of the FL tube is checked by turning ON and OFF all segments.

Next, a short between segments next to each other is checked by turning ON and OFF all segments alternately (in lattice).

(In the above example, the segments in the second row from the top are shorted.)

Z1. ZONE TEST

This menu is used to check audio signal route to ZONE2 OUT jack.



Z1-1. AV1
Not for service.

Z1-2. AV2
Not for service.

Z1-3. AV3
Not for service.

Z1-4. AV4
Not for service.

Z1-5. AV5
The audio signal input to AV5 jack is output to ZONE 2 OUT jack.

Z1-6. AV6
The audio signal input to AV6 jack is output to ZONE 2 OUT jack.

Z1-7. AUDIO1
The audio signal input to AUDIO1 jack is output to ZONE 2 OUT jack.

Z1-8. AUDIO2
The audio signal input to AUDIO2 jack is output to ZONE 2 OUT jack.

Z1-9. V-AUX
Not for service.

Z1-10. PHONO
Not for service.

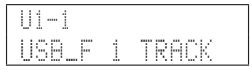
U1. USB

This menu is used to check the audio signal route from USB storage device.

U1-1. USB FRONT 1 TRACK

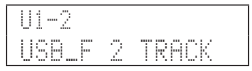
The 1st music file stored in the USB storage device connected to the USB jack is reproduced.

* Copy 2 or more music files from PC to the root folder of the USB storage device in advance.



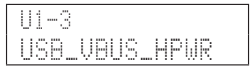
U1-2. USB FRONT 2 TRACK

The 2nd music file stored in the USB storage device connected to the USB jack is reproduced.



U1-3. USB_VBUS HIGH POWER

The output current (USB_VBUS) of USB jack is output at up to 2.1A/5V.



N1. NETWORK

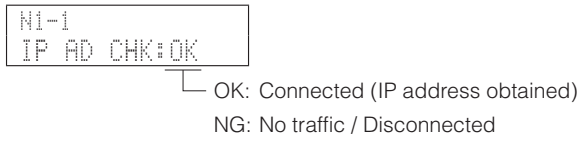
This menu is used to check functions related to NETWORK.

Connect between LAN port of broadband router and NETWORK jack of this unit with a network cable.

* When the network condition varies while sub-menu is displayed (e.g., the network is deactivated once), the correct result will not be displayed.
  In that case, once turn off the power to this unit, then start up the self-diagnostic function again and select this menu.

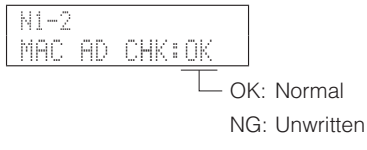
N1-1. IP ADDRESS CHECK

This menu is used to check that IP address can be obtained.



N1-2. MAC ADDRESS CHECK

This menu is used to check that MAC address is written.



N1-3. LINE NOISE 100 MDI

Not for service.

```
N1-3
LN MDI 100
```

N1-4. LINE NOISE 100 MDIX

Not for service.

```
N1-4
LN MDIX 100
```

N1-5. LINE NOISE 10 MDI

Not for service.

```
N1-5
LN MDI 10
```

N1-6. LINE NOISE 10 MDIX

Not for service.

```
N1-6
LN MDIX 10
```

N1-7. EXT TEST

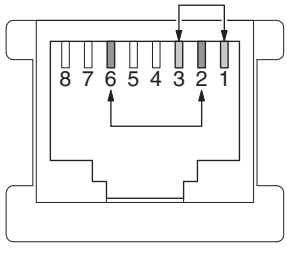
Transmission/reception of the NETWORK jack is checked.

With the power turned off, short the pins of the NETWORK jack as shown in the figure below.

Start up the self-diagnostic function and select this menu.

Transmission/reception test is executed and its result is displayed.

Note: Be sure to return the shorted pins to their original condition after executing this test.



NETWORK jack

```
N1-7
EXT TEST:OK
```

OK: Normal
NG: Abnormal
--: Checking

N1-8. MAC ADDRESS

Written MAC address is displayed.

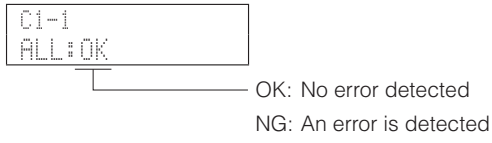
```
N1-8
00A0DExxxxxx
```

C1. DIGITAL P.C.B. CHECK

This menu is used to check the communication and bus line connection between devices on DIGITAL P.C.B.

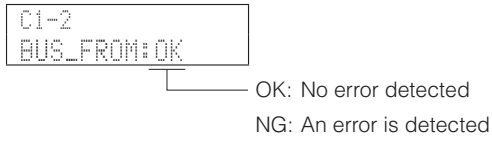
C1-1. ALL

The synthetic judgment result of sub-menu C1-2 to C1-8 is displayed.



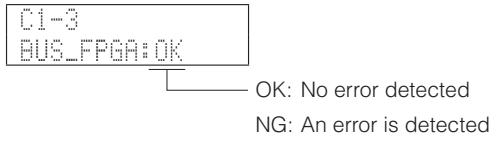
C1-2. BUS FLASH ROM

FLASH ROM (IC77)'s reading/writing are checked.



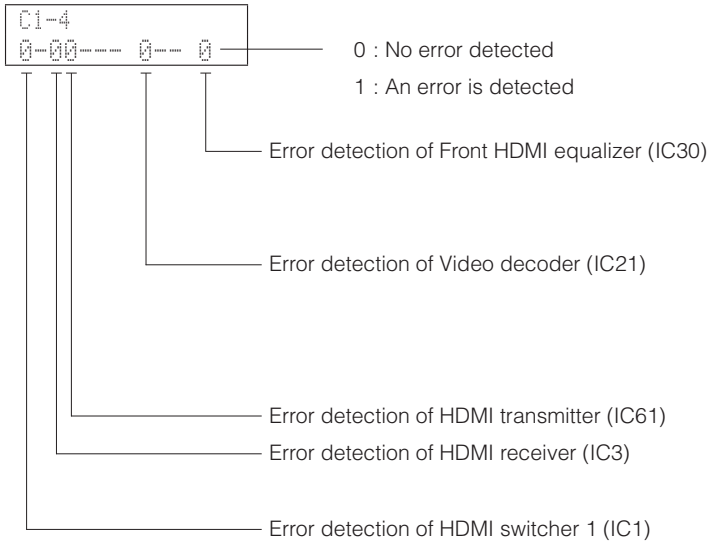
C1-3. BUS FPGA

Communication and bus line connection between microprocessor (IC83) and FPGA (IC50) are checked.



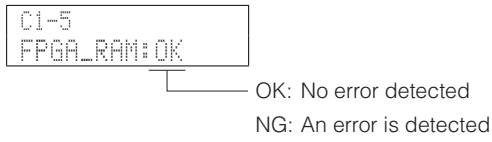
C1-4. I2C

The I2C (Inter integrated circuit) bus line connection is checked.



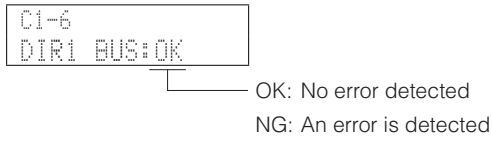
C1-5. FPGA RAM

SDRAM (IC53)'s reading/writing are checked.



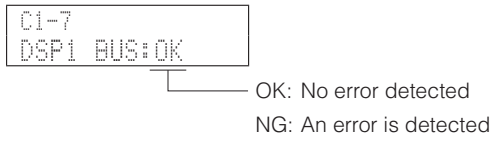
C1-6. BUS DIR1

Communication and bus line connection between microprocessor (IC83) and DIR1 (IC924) are checked.



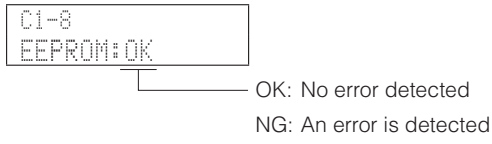
C1-7. BUS DSP1

Communication and bus line connection between microprocessor (IC83) and DSP1 (IC921) are checked.



C1-8. EEPROM

EEPROM (IC82)'s reading is checked.

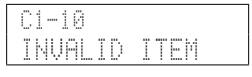


C1-9. INVALID ITEM

Not for service.

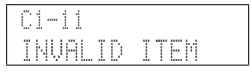
C1-10. INVALID ITEM

Not for service.



C1-11. INVALID ITEM

Not for service.

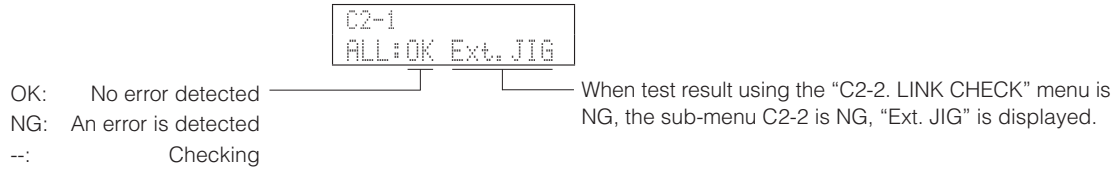


C2. NETWORK IC CHECK

This menu is used to check the communication and bus line connection between devices related to network.

C2-1. ALL

The synthetic judgment result of sub-menu C2-2 to C2-5 is displayed.

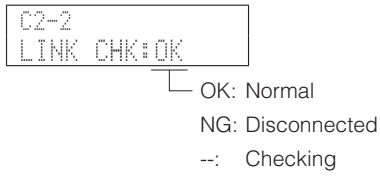


C2-2. LINK CHECK

LAN cable connection is checked.

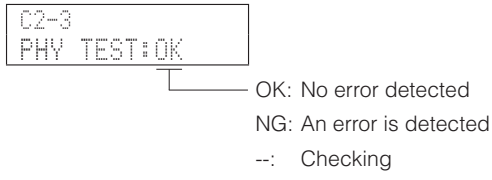
Connect between NETWORK jack of this unit and LAN port of broadband router with a network cable.

* When the network condition varies while sub-menu is displayed (e.g., the network is deactivated once), the correct result will not be displayed. In that case, once turn off the power to this unit, then start up the self-diagnostic function again and select this menu.



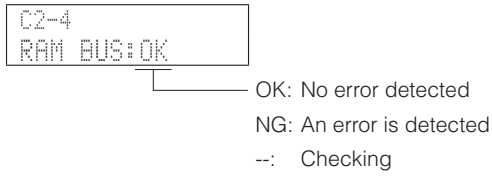
C2-3. PHY (Ethernet PHYceiver) TEST

Communication and bus line connection between PHY (IC955) and NETWORK microprocessor (IC951) are checked.



C2-4. BUS RAM

Communication and bus line connection between SDRAM (IC952) and NETWORK microprocessor (IC951) are checked.



C2-5. APL (Apple) ID CHECK

Apple authentication IC (IC956) device ID is checked.

```
C2-5
APL ID:OK
```

OK: No error detected
NG: An error is detected
--: Checking

V1. ANALOG VIDEO CHECK

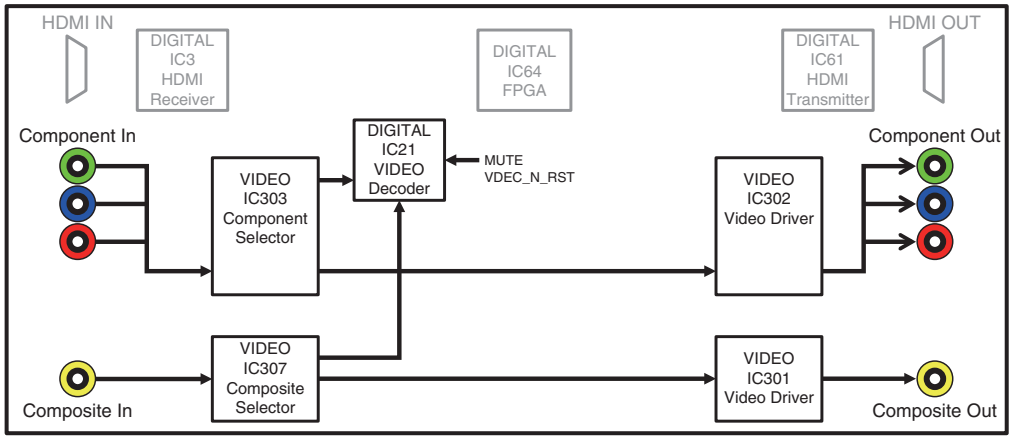
This menu is used to check the analog video signal route.

V1-1. ANALOG BYPASS

The video signal is converted and output as shown below.

```
V1-1
ANALOG BYPASS
```

ANALOG BYPASS



V1-2. INVALID ITEM

Not for service.

```
V1-2
INVALID ITEM
```

V1-3. INVALID ITEM

Not for service.

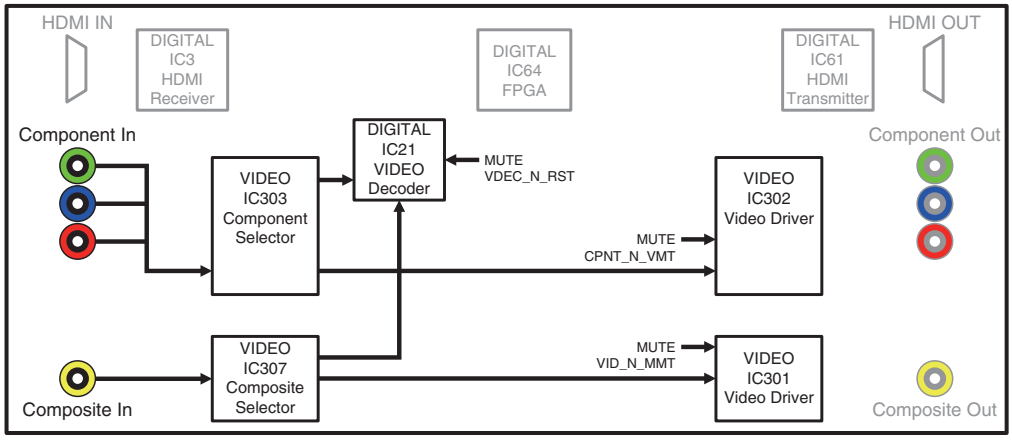
```
V1-3
INVALID ITEM
```

V1-4. MUTE CHECK

The video signal is muted.

```
V1-4
MUTE CHECK
```

MUTE CHECK



V1-5. TEST PATTERN

Not for service.

```
V1-5
TEST PATTERN
```

V1-6. VIDEO INFORMATION

The information of input analog video signals is displayed.

```
V1-6
VID IN:480i60
```

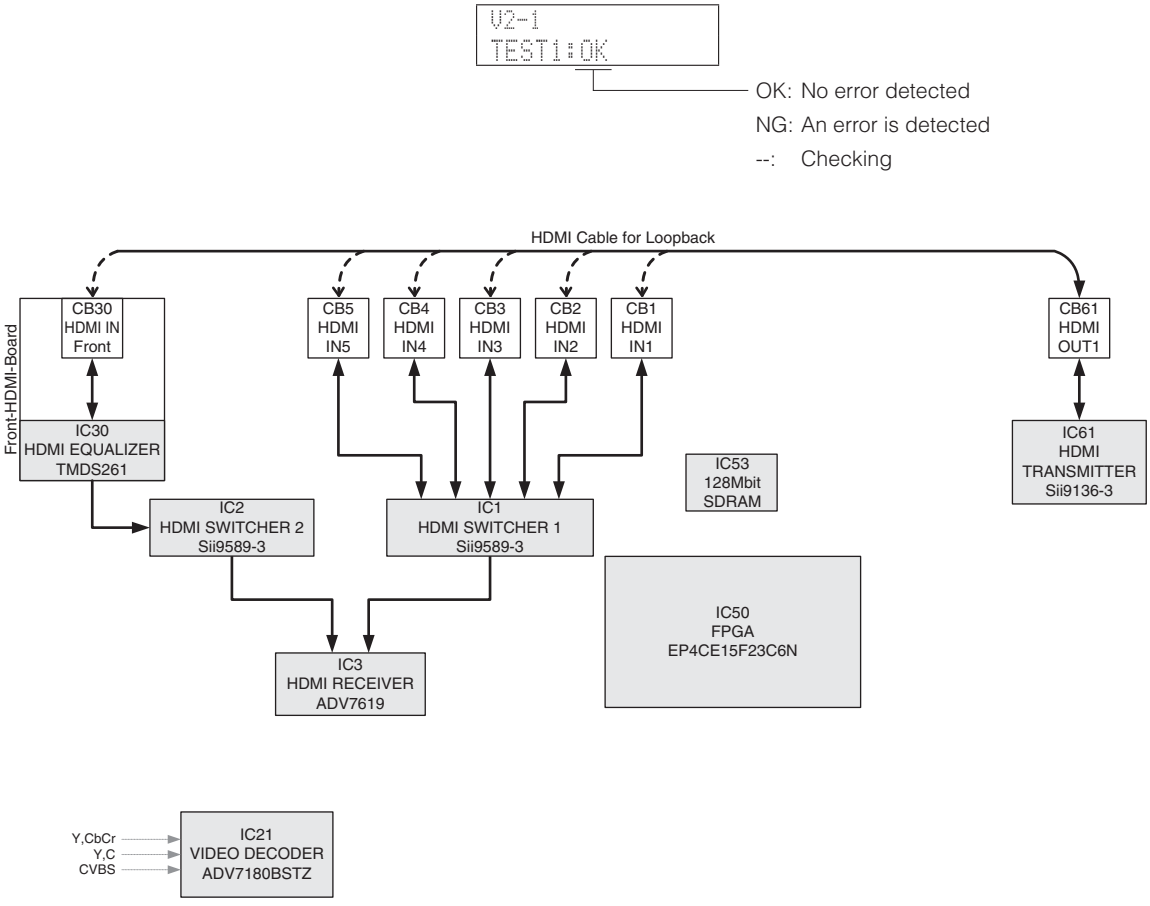
V2. DIGITAL VIDEO CHECK

This menu is used to check the digital video signal route.

V2-1. LOOPBACK TEST 1

Execute the test for all HDMI IN jacks by repeating the procedure below.

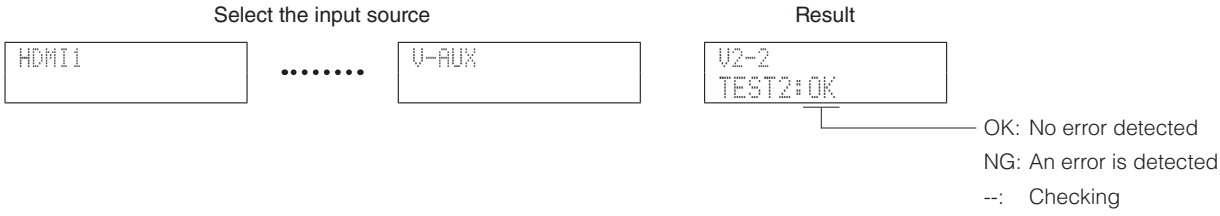
1. Select sub-menu other than V2-1.
2. Connect between any of the HDMI IN jacks and HDMI OUT jack with an HDMI cable.
3. Select V2-1. The test result is displayed in a few seconds.

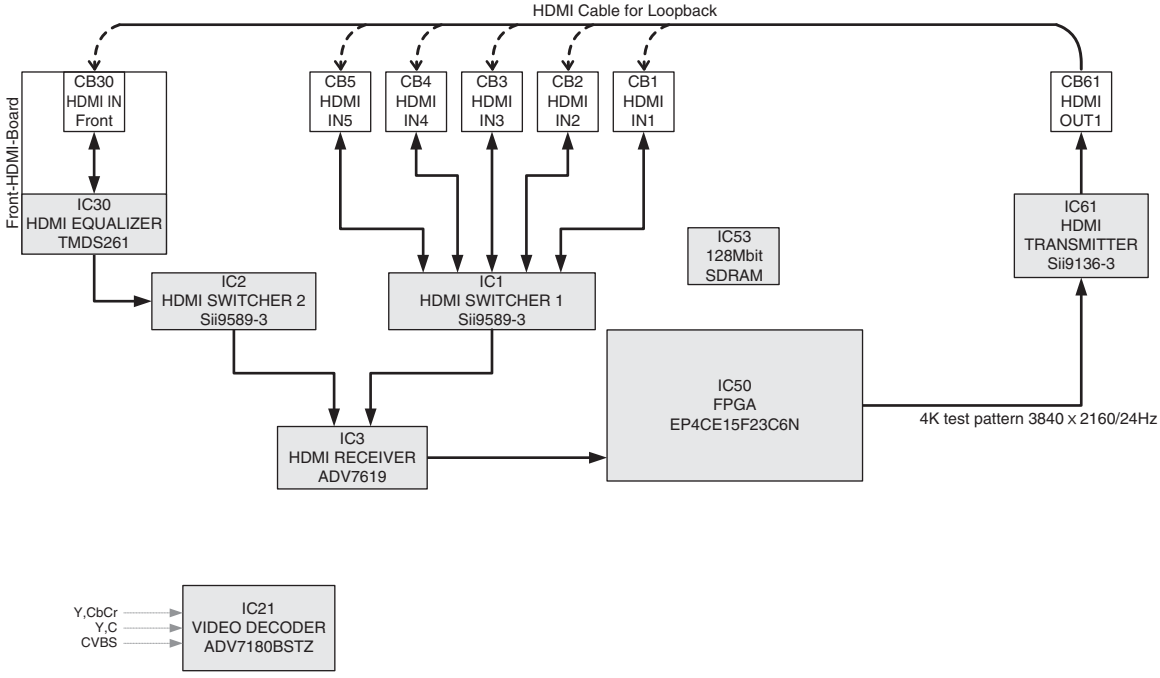


V2-2. LOOPBACK TEST 2

Execute the test for all HDMI IN jacks by repeating the procedure below.

1. Select sub-menu other than V2-2.
2. Connect between any of the HDMI IN jacks and HDMI OUT jack with an HDMI cable.
3. Select the input source corresponding to the connected HDMI IN jack by using "INPUT ◁" and "INPUT ▷" keys (RX-V673/HTR-6065) / "INPUT" knob (RX-A720).
4. Select V2-2. The test result is displayed in a few seconds.

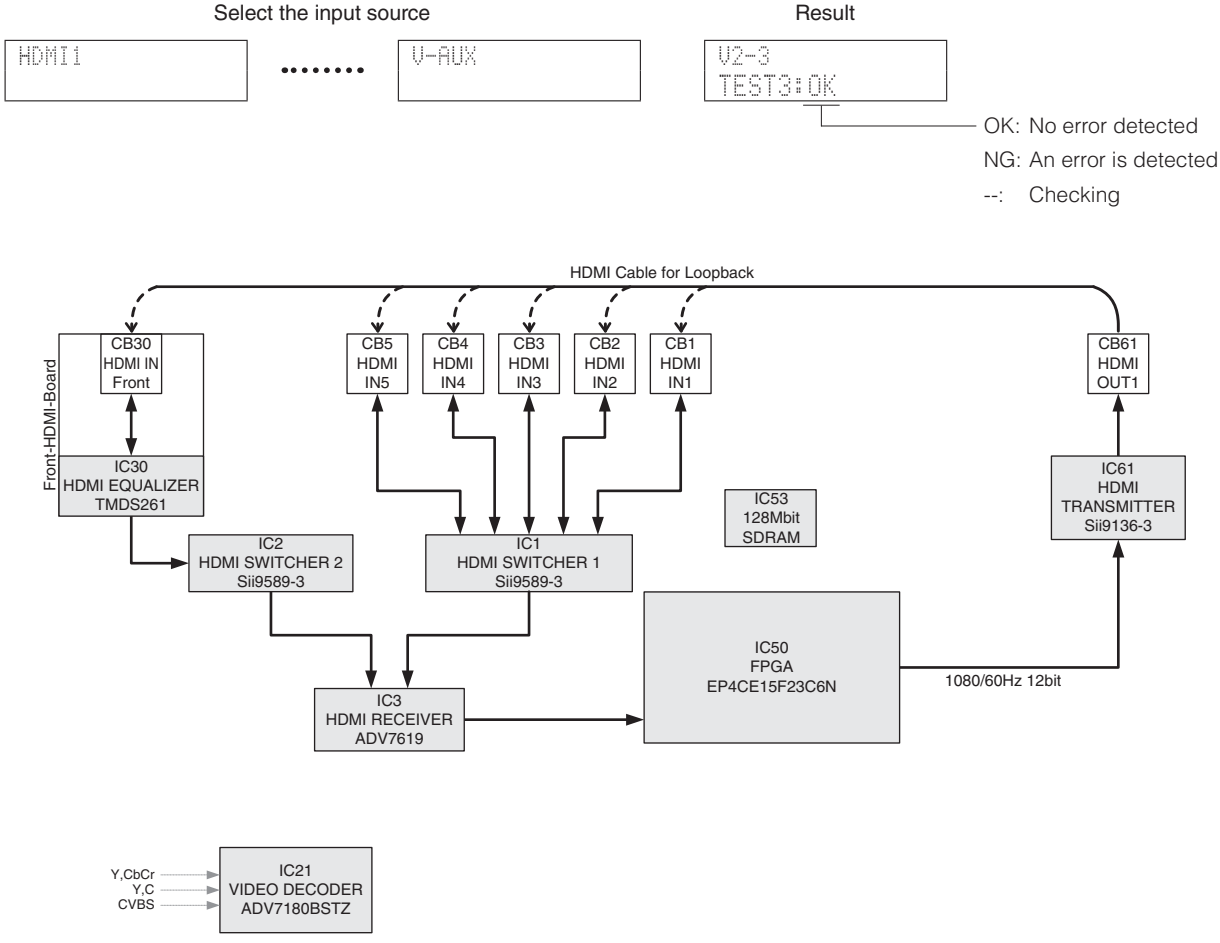




V2-3. LOOPBACK TEST 3

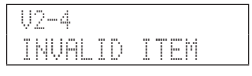
Execute the test for all HDMI IN jacks by repeating the procedure below.

1. Select sub-menu other than V2-3.
2. Connect between any of the HDMI IN jacks and HDMI OUT jack with an HDMI cable.
3. Select the input source corresponding to the connected HDMI IN jack by using "INPUT ◁" and "INPUT ▷" keys (RX-V673/HTR-6065) / "INPUT" knob (RX-A720).
4. Select V2-3. The test result is displayed in a few seconds.



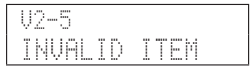
V2-4. INVALID ITEM

Not for service.



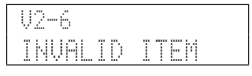
V2-5. INVALID ITEM

Not for service.



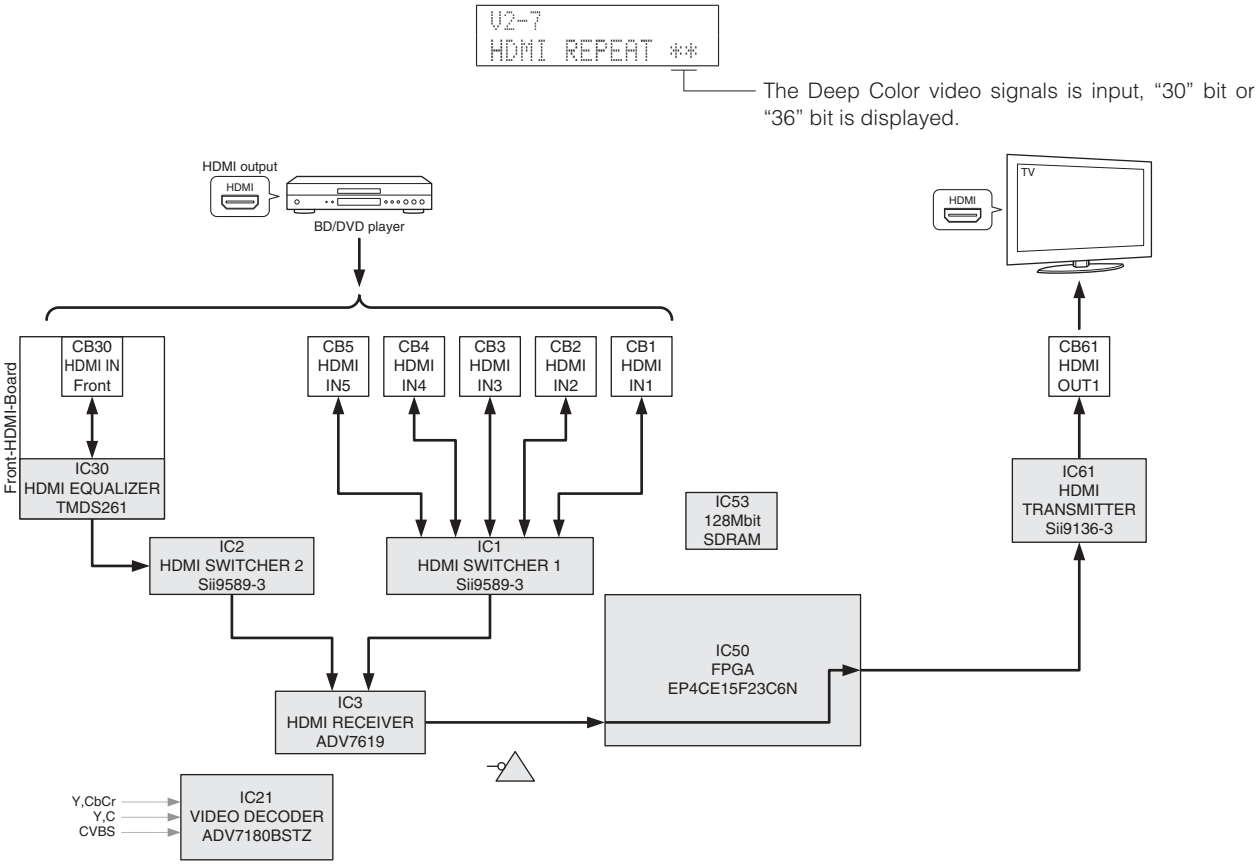
V2-6. INVALID ITEM

Not for service.



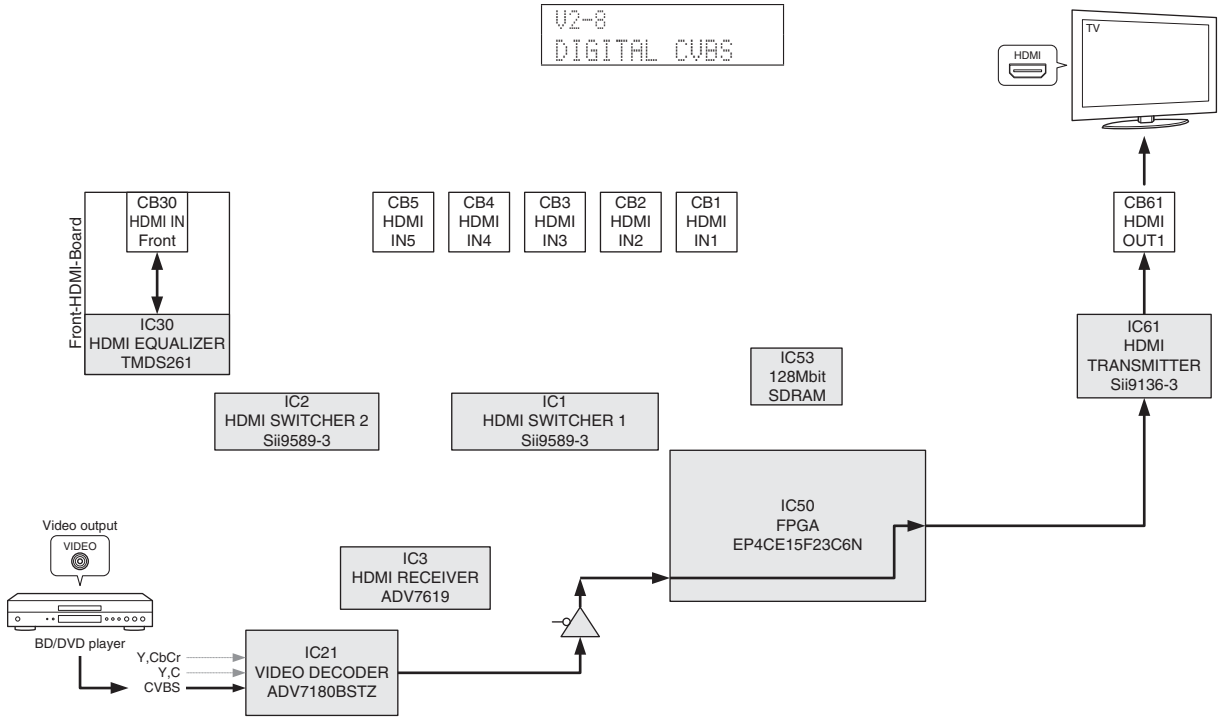
V2-7. HDMI REPEAT

The video/audio signals input to HDMI IN jack are output to HDMI OUT jack.



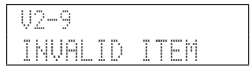
V2-8. DIGITAL CVBS

The video (CVBS) signal is converted and output as shown below.



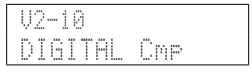
V2-9. INVALID ITEM

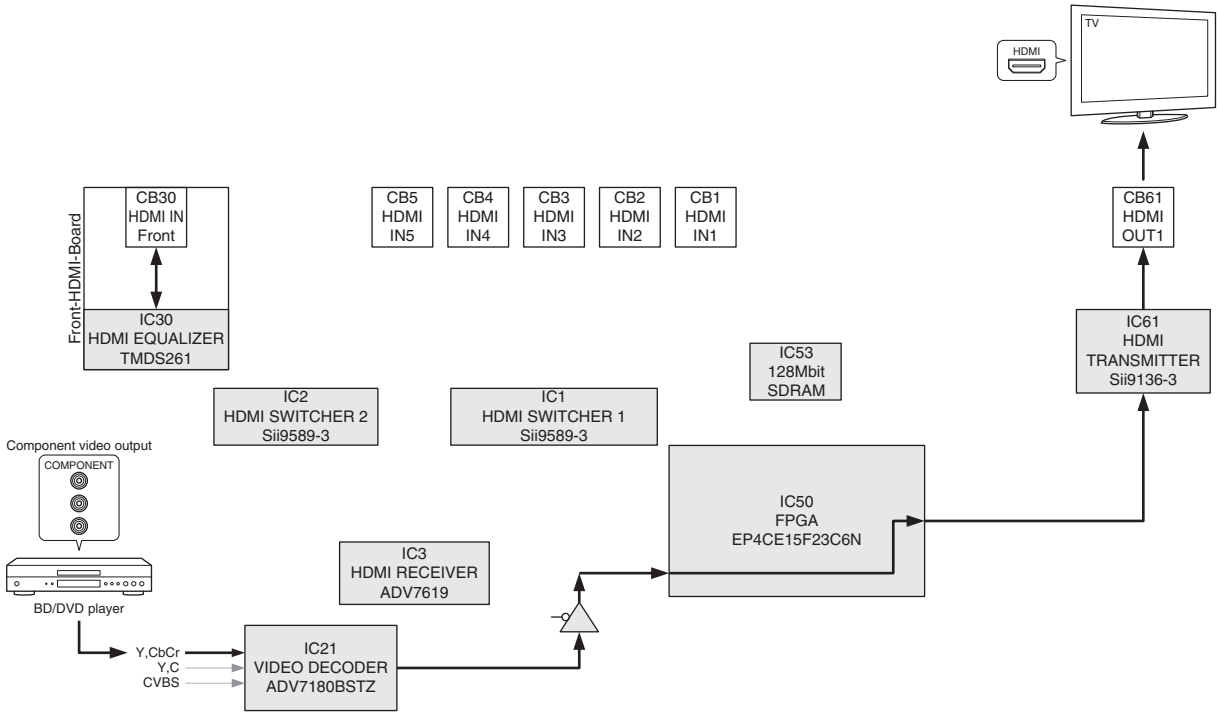
Not for service.



V2-10. DIGITAL COMPONENT

The component video (Y, Cb, Cr) signal is converted and output as shown below.

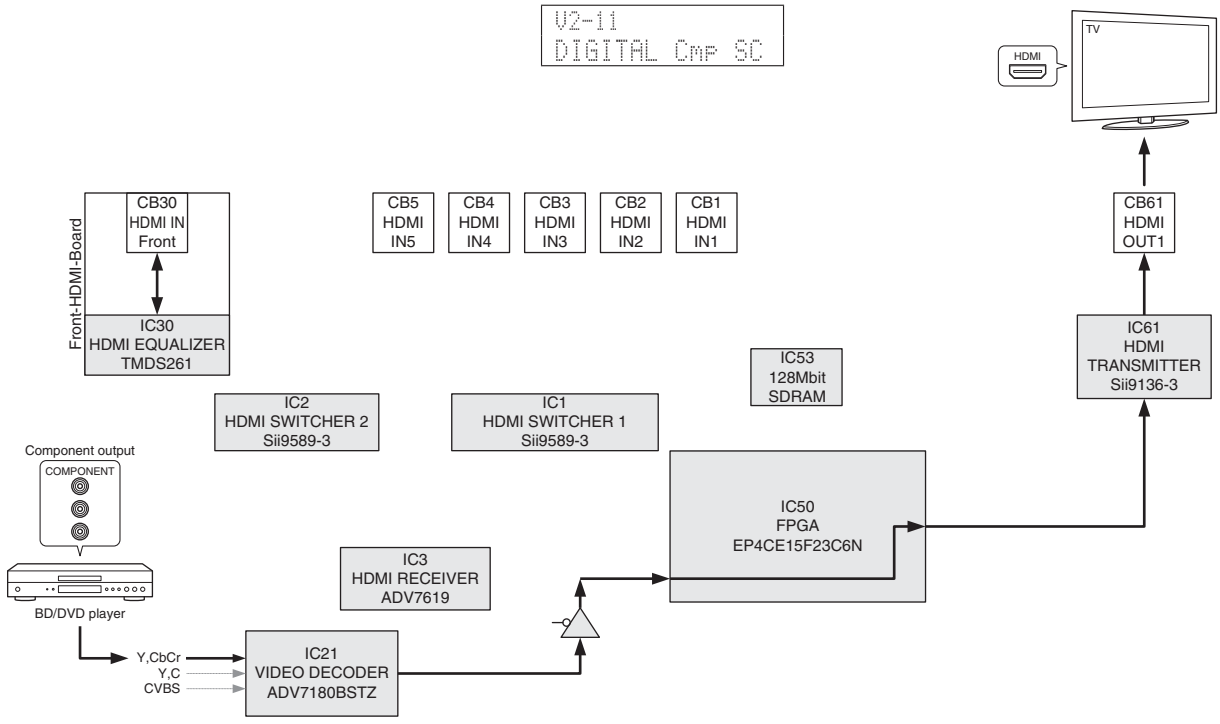




V2-11. DIGITAL COMPONENT SC

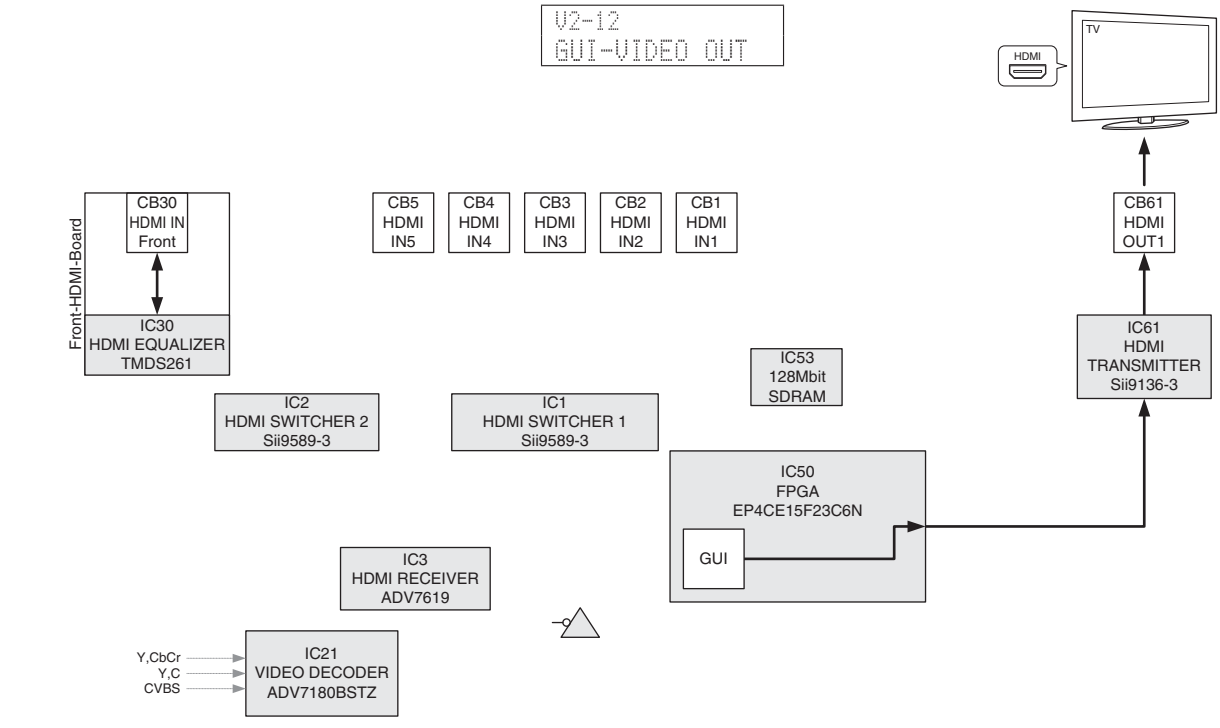
The component video (Y, Cb, Cr) signal is converted and output as shown below.

HDMI video output up-scaling: 480i/p, 576i/p only => 1080p



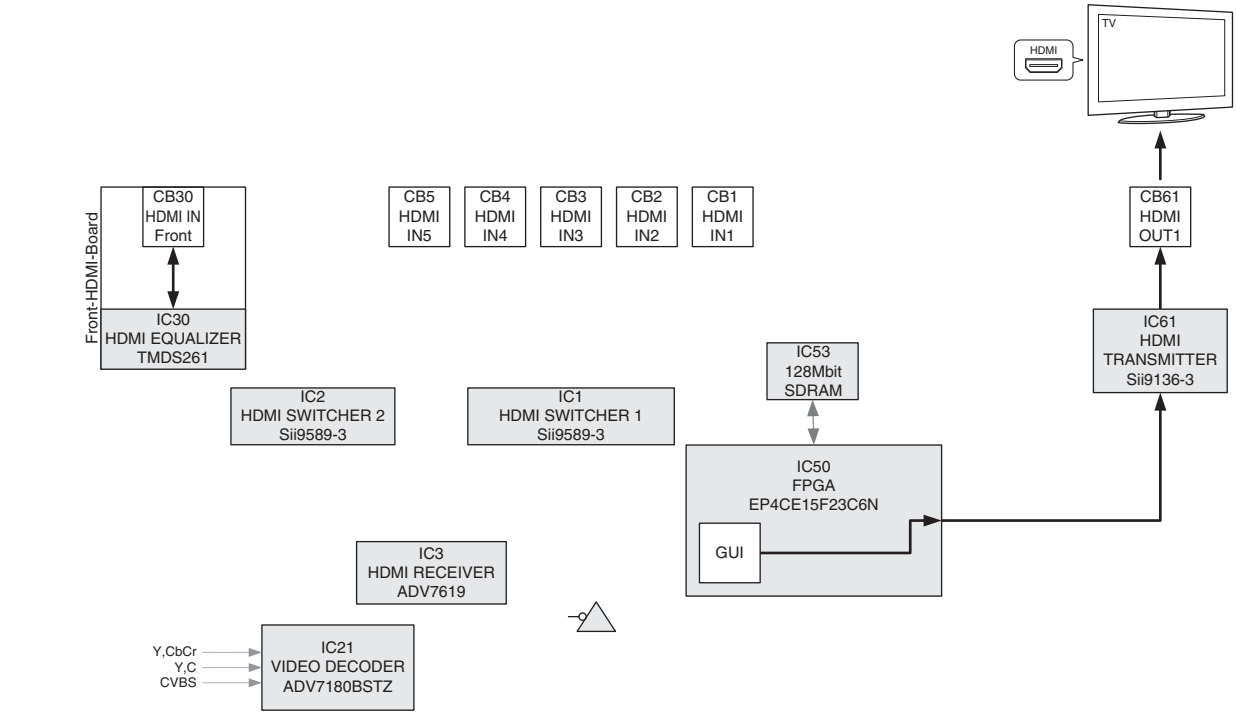
V2-12. GUI (Graphical User Interface)-VIDEO OUT

The GUI is output from FPGA (IC50 on DIGITAL P.C.B.).



V3. TEST PATTERN

The video signal is output to HDMI OUT jack with its resolution converted as shown below.



V3-1. 480i

V3-1
480i

V3-2. 480p

V3-2
480p

V3-3. 720p 60Hz

V3-3
720p 60

V3-4. 1080i 60Hz

V3-4
1080i 60

V3-5. 1080p 60Hz

V3-5
1080p 60

V3-6. 576i

V3-6
576i

V3-7. 576p

V3-7
576p

V3-8. 720p 50Hz

V3-8
720p 50

V3-9. 1080i 50Hz

V3-9
1080i 50

V3-10. 1080p 50Hz

V3-10
1080p 50

V3-11. 1080p 24Hz

V3-11
1080p 24

V3-12. 1080p 24Hz 3D/FP

V3-12
1080p 24 3D/FP

(FP: Frame Packing)

V3-13. 720p 60Hz 3D/FP

V3-13
720p 60 3D/FP

V3-14. 720p 50Hz 3D/FP

V3-14
720p 50 3D/FP

V3-15. 1080i 60Hz 3D/FP

V3-15
1080i 60 3D/FP

V3-16. 1080i 60Hz 3D/SS

V3-16
1080i 60 3D/SS

(SS: Side-by-Side)

V3-17. 1080i 50Hz 3D/SS

V3-17
1080i 50 3D/SS

V3-18. 720p 60Hz 3D/TB

V3-18
720p 60 3D/TB

V3-19. 720p 50Hz 3D/TB

V3-19
720p 50 3D/TB

V3-20. 1080p 24Hz 3D/TB

V3-20
1080p 24 3D/TB

(TB: Top-and-Bottom)

V3-21. 4k 24Hz

V3-21
4k 24

(4k: Digital cinema 4K, Resolution 3996 × 2160p)

P1. SYSTEM MONITOR

This menu is used to display the A/D conversion value of the microprocessor which detects panel keys and protection functions by using the sub-menu.

When “P1-7. KEY1/KEY2” sub-menu is selected, keys become inoperable due to detection of the values of all keys.

However, it is possible to advance to the next menu by pressing the “SCENE RADIO” (forward) key or “SCENE NET” (reverse) key on the remote control.

* Numeric values in the figure are given as reference only.

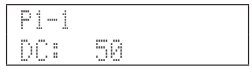
P1-1. DC

Power amplifier DC (DC voltage) output is detected.

The voltage at 5 pin (DC_PRT) of IC78 is displayed.

Normal value: 32 to 74
(Reference voltage: 3.3 V=255)

* If DC becomes out of the normal value range, the protection function works to turn off the power.



P1-2. PS1/PS2/PS3

Power supply voltage (PS) protection detection.

The voltage at 2 pin (PS1_PRT)/1 pin (PS2_PRT)/13 pin (PS3_PRT) of IC78 are displayed.

Voltage detects

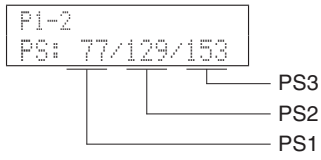
PS1: ACBL, AC12, AC5, ±7
PS2: -VP, +5T, ±5V
PS3: +5.5V

Normal value

PS1: 12 to 100
PS2: 90 to 166 (PURE DIRECT mode: 143 to 220)
PS3: 132 to 168

(Reference voltage: 3.3 V=255)

* If PS1, PS2 or PS3 becomes out of the normal value range, the protection function works to turn off the power.



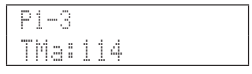
P1-3. THM

Temperature of the heatsink (THM) is detected.

The voltage at 12 pin (THM1) of IC78 is displayed.

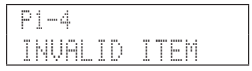
Normal value: 116 to 255 (U, C models)
42 to 255 (R, T, K, A, B, G, F, L, S, H models)
(Reference voltage: 3.3 V=255)

* If THM becomes out of the normal value range, the protection function works to turn off the power.



P1-4. INVALID ITEM

Not for service.



P1-5. OUTPUT LEVEL

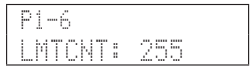
Output level of speaker output is detected.

The voltage at 4 pin (AMP_OLV) of IC78 is displayed.
(Reference voltage: 3.3 V=255)

P1-6. LIMITER CONTROL

Power limitter control is detected.

The voltage at 4 pin (AMP_LMT) of IC83 is displayed.
(Reference voltage: 3.3 V=255)



P1-7. L3 (J model)

Not for service.

P1-8. KEY1/KEY2

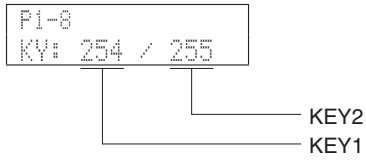
Panel key is detected.

When the A/D conversion value of the panel key becomes out of the specified range, normal operation will not be available.

In that case, check the constant of voltage dividing resistor, solder condition, etc. Refer to table.

* When “P1-8. KEY1/KEY2” menu is selected, keys become inoperable due to detection of the values of all keys. However, it is possible to advance to the next menu by pressing the “SCENE RADIO” (forward) key or “SCENE NET” (reverse) key on the remote control.

(Reference voltage: 3.3 V=255)



Display	KEY1
0 – 11	RADIO (SCENE4)
12 – 32	NET (SCENE3)
33 – 54	TV (SCENE2)
55 – 75	BD/DVD (SCENE1)
76 – 96	ZONE CONTROL
97 – 119	ZONE2
120 – 142	INPUT > (RX-V673/HTR-6065 models)
143 – 172	INPUT < (RX-V673/HTR-6065 models)
173 – 202	MAIN ZONE ⏻
203 – 235	TONE CONTROL
255	Key off

Display	KEY2
0 – 11	PURE DIRECT
12 – 32	TUNING >>
33 – 54	TUNING <<
55 – 77	AM
78 – 99	FM
100 – 121	PRESET >
122 – 144	PRESET <
145 – 166	MEMORY
167 – 186	INFO
187 – 205	STRAIGHT
206 – 226	PROGRAM >
227 – 246	PROGRAM <
255	Key off

P1-9. USB-VBUS

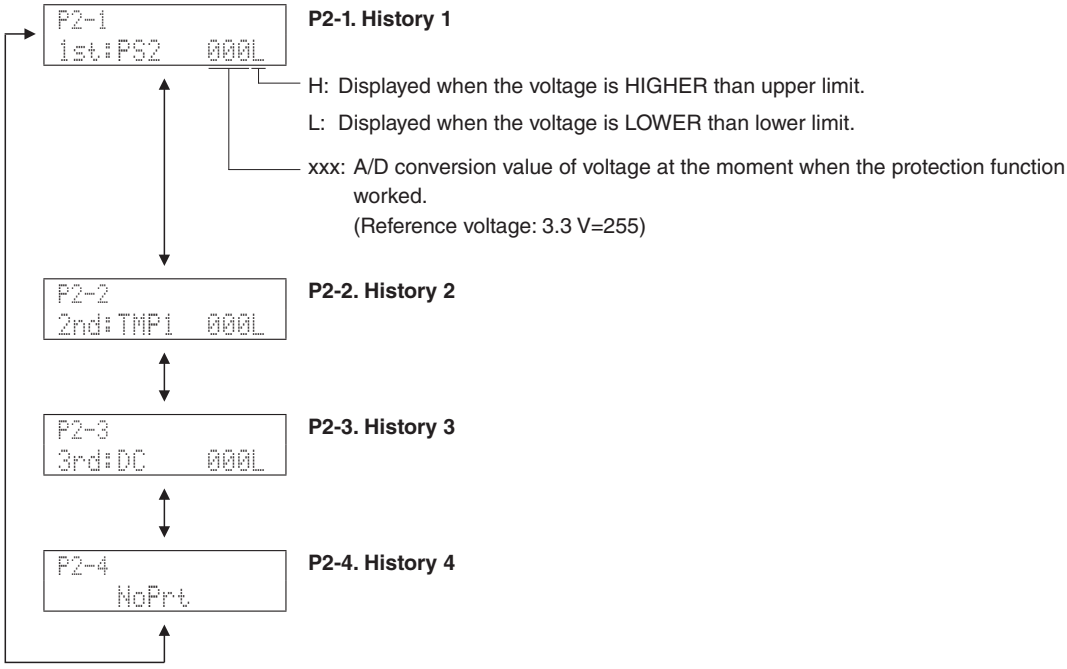
Not for service.

P2. PROTECTION HISTORY

This menu is used to display the history of protection function.

All history of protection function will be erased by pressing the “STRAIGHT” key.

* Numeric values in the figure are given as reference only.



S1. FIRMWARE UPDATE

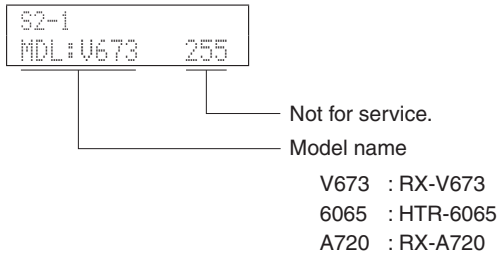
Not for service.

S2. SET INFORMATION

The model name and destination of this unit are displayed.

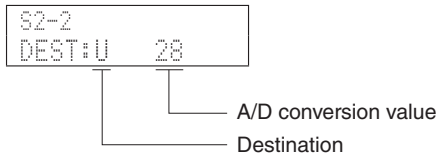
S2-1. MODEL

The model name of this unit is displayed.



S2-2. DESTINATION

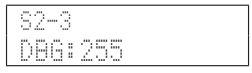
The destination of this unit is displayed.



Destination	J	U	C	R (R, S)	T	K	A	BG (B, G, F)	L (L, H)
A/D conversion value (3.3 V=255)	0 – 12	13 – 39	40 – 67	68 – 92	93 – 115	116 – 140	141 – 169	199 – 221	222 – 244

S2-3. DEBUG

Not for service.



S2-4. NET RESTART COUNTER

Not for service.

S3. FACTORY PRESET

This menu is used to reserve/inhibit initialization of the back-up IC (EEPROM: IC82 on DIGITAL P.C.B.).

S3-1. PRESET INHIBIT (Initialization inhibited)

Initialization of the back-up IC is not executed. Select this sub-menu to protect the values set by the user.

S3-1. PRESET RESERVED (Initialization reserved)

Initialization of the back-up IC is reserved. (Actual initialization is executed when the power is turned on next.) To reset to the original factory settings or to reset the backup IC, select this sub-menu and press the "MAIN ZONE ⏻" key to turn off the power.

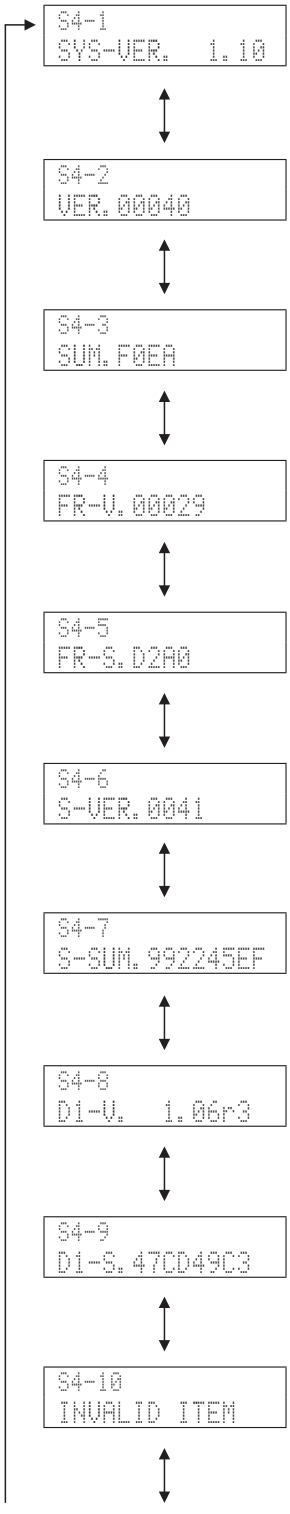
CAUTION: Before setting to the PRESET RESERVED, write down the existing preset memory content of the tuner. (This is because setting to the PRESET RESERVED will cause the user memory content to be erased.)

S4. ROM VERSION/CHECKSUM

The firmware version and checksum values are displayed.

The checksum is obtained by adding the data at every 8-bit and expressing the result as a hexadecimal notation.

* Numeric values in the figure are given as reference only.



S4-1. SYSTEM VERSION

The firmware version is displayed.

S4-2. MICROPROCESSOR VERSION

The firmware version of MICROPROCESSOR (IC83 on DIGITAL P.C.B.) is displayed.

S4-3. MICROPROCESSOR CHECKSUM

The checksum value of MICROPROCESSOR (IC83 on DIGITAL P.C.B.) is displayed.

S4-4. FLASH ROM VERSION

The firmware version of FLASH ROM (IC77 on DIGITAL P.C.B.) is displayed.

S4-5. FLASH ROM CHECKSUM

The checksum value of FLASH ROM (IC77 on DIGITAL P.C.B.) is displayed.

S4-6. NETWORK MICROPROCESSOR VERSION

The firmware version of Network microprocessor (IC951 on DIGITAL P.C.B.) is displayed.

S4-7. NETWORK MICROPROCESSOR CHECKSUM

The checksum value of Network microprocessor (IC951 on DIGITAL P.C.B.) is displayed.

S4-8. DSP1 VERSION

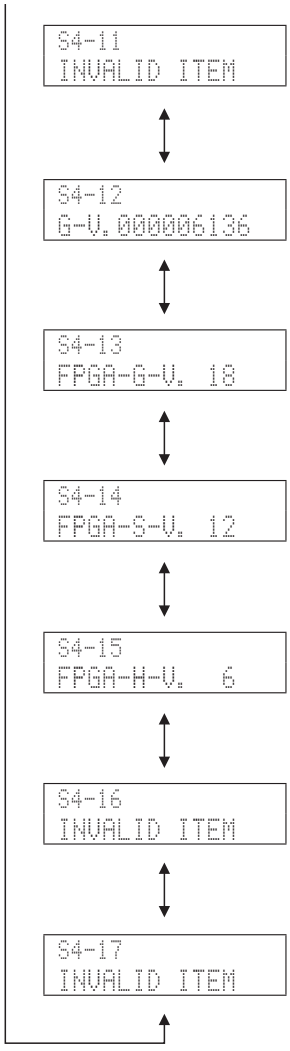
The firmware version of DSP1 (IC921 on DIGITAL P.C.B.) is displayed.

S4-9. DSP1 CHECKSUM

The checksum value of DSP1 (IC921 on DIGITAL P.C.B.) is displayed.

S4-10. INVALID ITEM

Not for service.



S4-11. INVALID ITEM

Not for service.

S4-12. GUI VERSION

The firmware version of GUI data is displayed.

S4-13. FPGA GUI VERSION

The firmware version of GUI section in FPGA (IC50 on DIGITAL P.C.B.) is displayed.

S4-14. FPGA SD (Standard Definition) VERSION

The firmware version of SD I/P scaler section in FPGA (IC50 on DIGITAL P.C.B.) is displayed.

S4-15. FPGA HD (High Definition) VERSION

The firmware version of HD I/P scaler section in FPGA (IC50 on DIGITAL P.C.B.) is displayed.

S4-16. INVALID ITEM

Not for service.

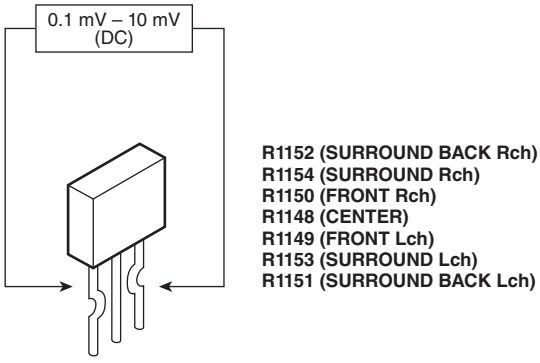
S4-17. INVALID ITEM

Not for service.

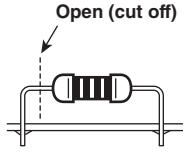
■ POWER AMPLIFIER ADJUSTMENT

1. Right after power is turned on, confirm that the voltage across the terminals of R1152 (SURROUND BACK Rch), R1154 (SURROUND Rch), R1150 (FRONT Rch), R1148 (CENTER), R1149 (FRONT Lch), R1153 (SURROUND Lch) and R1151 (SURROUND BACK Lch) are within the confines of 0.1 mV to 10 mV.
2. If measured voltage exceeds 10 mV, open (cut off) R1104 (SURROUND BACK Rch), R1106 (SURROUND Rch), R1102 (FRONT Rch), R1100 (CENTER), R1101 (FRONT Lch), R1105 (SURROUND Lch) and R1103 (SURROUND BACK Lch), and then reconfirm the voltage.

   Attention
   If the measured voltage exceeds 10 mV after repairing the power amplifier, check other parts again for any possible defect before cutting the resistor.
3. Confirm that the voltage is within the confines of 0.2 mV to 15 mV after 60 minutes.

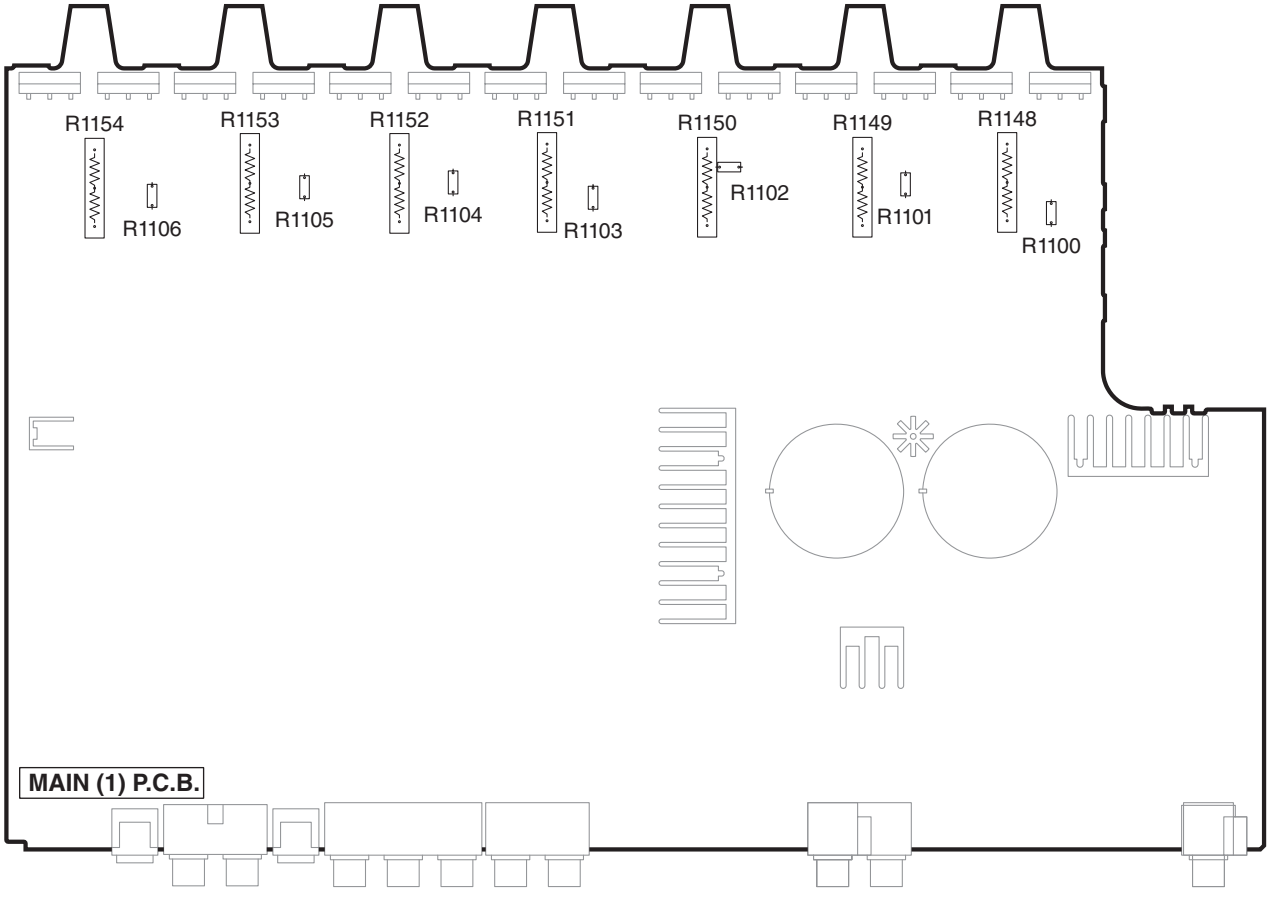


R1152 (SURROUND BACK Rch)
R1154 (SURROUND Rch)
R1150 (FRONT Rch)
R1148 (CENTER)
R1149 (FRONT Lch)
R1153 (SURROUND Lch)
R1151 (SURROUND BACK Lch)



R1104 (SURROUND BACK Rch)
R1106 (SURROUND Rch)
R1102 (FRONT Rch)
R1100 (CENTER)
R1101 (FRONT Lch)
R1105 (SURROUND Lch)
R1103 (SURROUND BACK Lch)

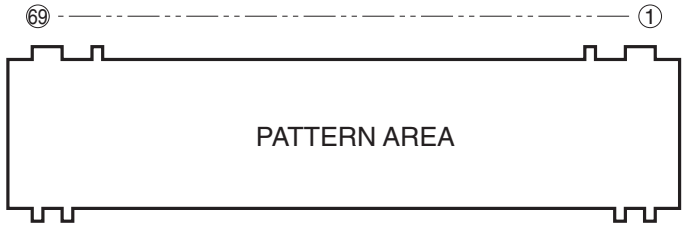
Front side



■ DISPLAY DATA

RX-V673/HTR-6065

● V4001 : 18-MT-11GNK (OPERATION P.C.B.)



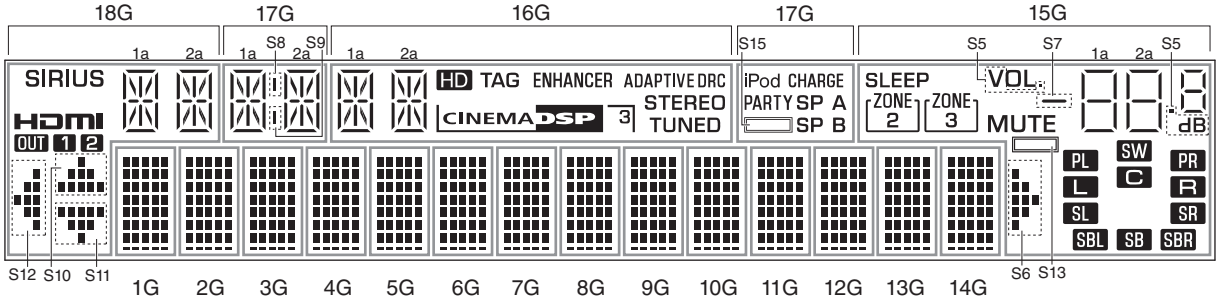
● PIN CONNECTION

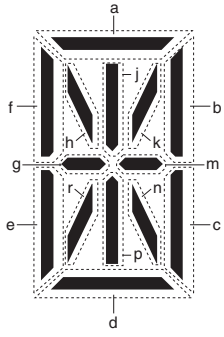
Pin No.	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
Connection	F2	NX	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31

Pin No.	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	P32	P33	P34	P35	P36	NX	NX	NX	NX	NX	NX	NX	18G	17G	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NX	F1

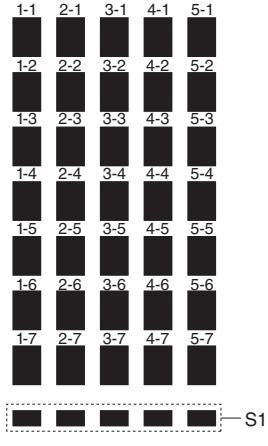
Note : 1) F1, F2 ..... Filament pin 2) NP ..... No pin 3) NX ..... No extend pin 4) 1G-18G ..... Grid pin

● GRID ASSIGNMENT

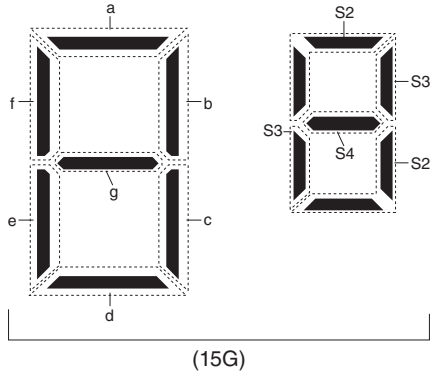




(18G–16G)



(1G–14G)



(15G)

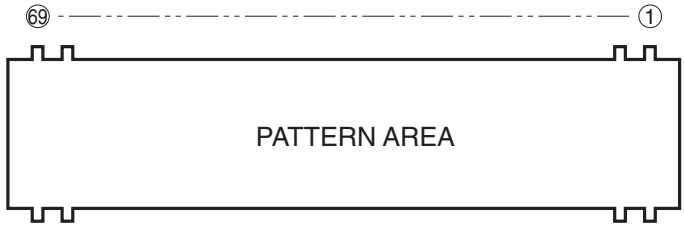
RX-V673/HTR-6065

● **ANODE CONNECTION**

	18G	17G	16G	15G	1G–14G
P1	1a	1a	1a	S5	1-1
P2	1h	1h	1h	S7	2-1
P3	1j	1j	1j	1d	3-1
P4	1k	1k	1k	2d	4-1
P5	1b	1b	1b	S2	5-1
P6	1f	1f	1f	1e	1-2
P7	1m	1m	1m	2e	2-2
P8	1g	1g	1g	S3	3-2
P9	1c	1c	1c	1c	4-2
P10	1e	1e	1e	2c	5-2
P11	1r	1r	1r	S4	1-3
P12	1p	1p	1p	1g	2-3
P13	1n	1n	1n	2g	3-3
P14	1d	1d	1d	1f	4-3
P15	2a	2a	2a	2f	5-3
P16	2h	2h	2h	1b	1-4
P17	2j	2j	2j	2b	2-4
P18	2k	2k	2k	1a	3-4
P19	2b	2b	2b	2a	4-4
P20	2f	2f	2f	PL	5-4
P21	2m	2m	2m	SW	1-5
P22	2g	2g	2g	PR	2-5
P23	2c	2c	2c	L	3-5
P24	2e	2e	2e	C	4-5
P25	2r	2r	2r	R	5-5
P26	2p	2p	2p	SL	1-6
P27	2n	2n	2n	SR	2-6
P28	2d	2d	2d	SBL	3-6
P29	SIRIUS	S8	HD	SB	4-6
P30	OUT	S9	TAG	SBR	5-6
P31	HDMI	iPod CHARGE	CINEMA DSP	S6	1-7
P32	1	SP B	3	S13	2-7
P33	2	S15	STEREO	MUTE	3-7
P34	S12	SP A	TUNED	ZONE 2	4-7
P35	S10	PARTY	ENHANCER	ZONE 3	5-7
P36	S11	–	ADAPTIVE DRC	SLEEP	S1

RX-A720

● V4001 : HNA-18MM03T (OPERATION P.C.B.)



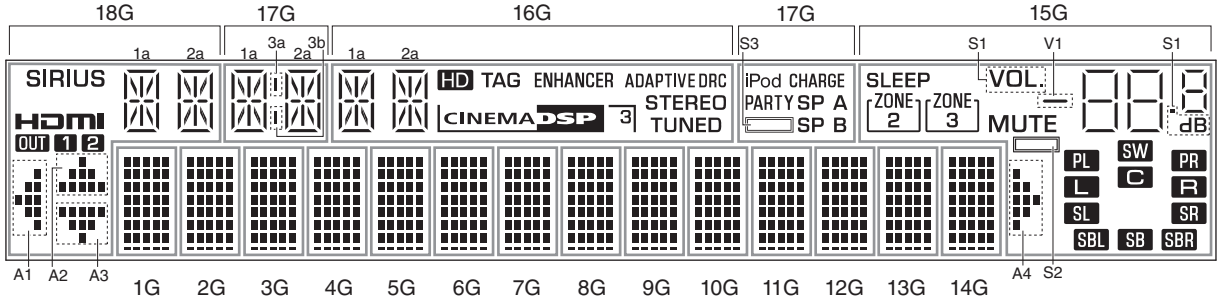
● PIN CONNECTION

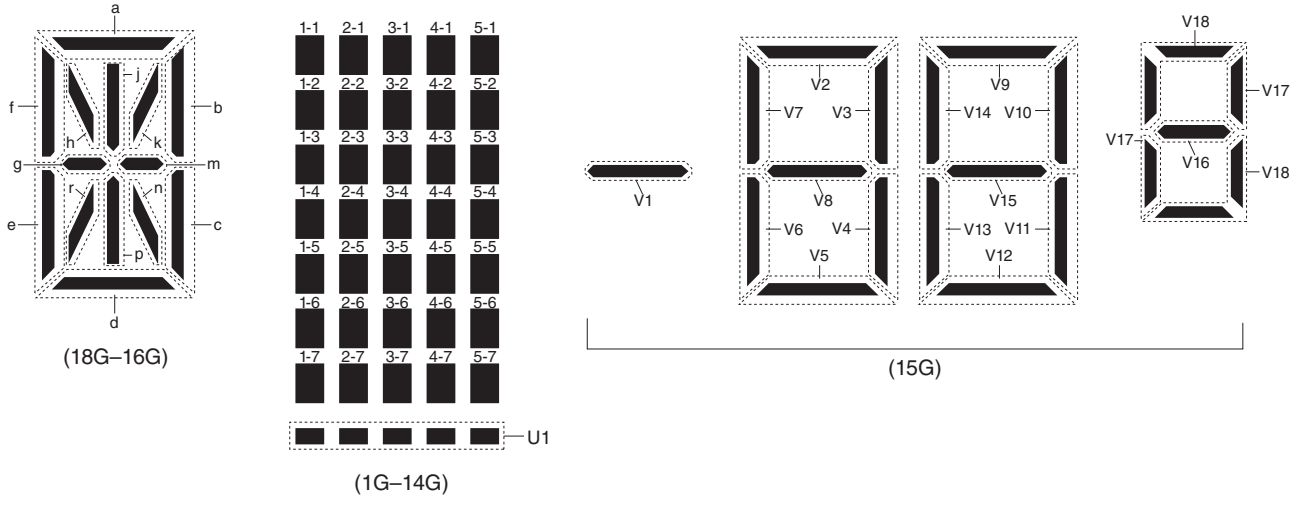
Pin No.	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
Connection	F2	F2	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	P28	P29	P30	P31

Pin No.	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	P32	P33	P34	P35	P36	NX	NX	NX	NX	NX	NX	NX	18G	17G	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	F1	F1

Note : 1) F1, F2 ..... Filament pin 2) 1G–18G ..... Grid pin 3) P1–P36 ..... Anode pin 4) NP ..... No pin 5) NX ..... No extended pin

● GRID ASSIGNMENT





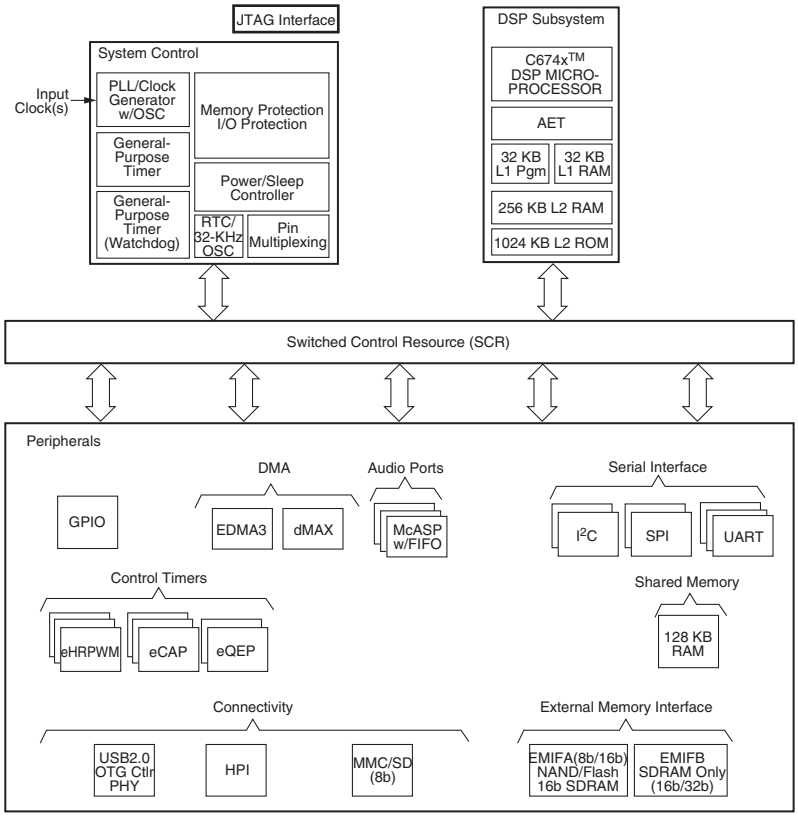
RX-A720

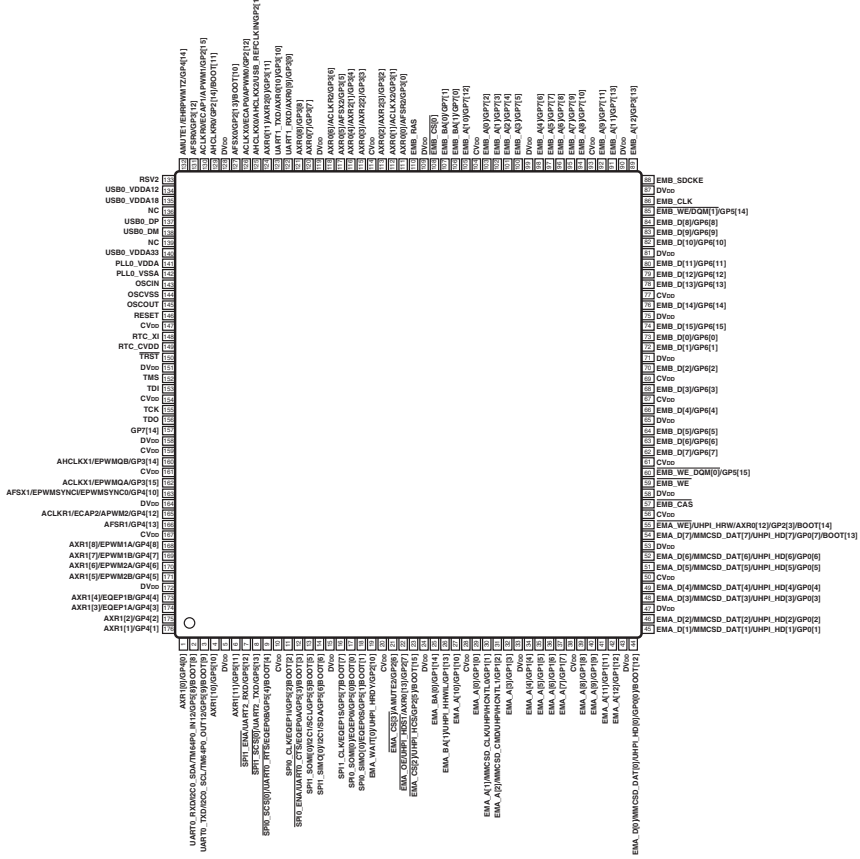
● **ANODE CONNECTION**

	18G	17G	16G	15G	1G–14G
P1	1a	1a	1a	S1	1-1
P2	1h	1h	1h	V1	2-1
P3	1j	1j	1j	V5	3-1
P4	1k	1k	1k	V12	4-1
P5	1b	1b	1b	V18	5-1
P6	1f	1f	1f	V6	1-2
P7	1m	1m	1m	V13	2-2
P8	1g	1g	1g	V17	3-2
P9	1c	1c	1c	V4	4-2
P10	1e	1e	1e	V11	5-2
P11	1r	1r	1r	V16	1-3
P12	1p	1p	1p	V8	2-3
P13	1n	1n	1n	V15	3-3
P14	1d	1d	1d	V7	4-3
P15	2a	2a	2a	V14	5-3
P16	2h	2h	2h	V3	1-4
P17	2j	2j	2j	V10	2-4
P18	2k	2k	2k	V2	3-4
P19	2b	2b	2b	V9	4-4
P20	2f	2f	2f	PL	5-4
P21	2m	2m	2m	SW	1-5
P22	2g	2g	2g	PR	2-5
P23	2c	2c	2c	L	3-5
P24	2e	2e	2e	C	4-5
P25	2r	2r	2r	R	5-5
P26	2p	2p	2p	SL	1-6
P27	2n	2n	2n	SR	2-6
P28	2d	2d	2d	SBL	3-6
P29	SIRIUS	3a	HD	SB	4-6
P30	OUT	3b	TAG	SBR	5-6
P31	HDMI	iPod CHARGE	CINEMA DSP	A4	1-7
P32	1	SP B	3	S2	2-7
P33	2	S3	STEREO	MUTE	3-7
P34	A1	SP A	TUNED	ZONE 2	4-7
P35	A2	PARTY	ENHANCER	ZONE 3	5-7
P36	A3	–	ADAPTIVE DRC	SLEEP	U1

■ IC DATA

IC921: D80YK113CPTP400 (DIGITAL P.C.B.)
Digital signal processor





Pin No.	Function Name	TYPE (1)	PULL (2)	Detail of Function
1	AXR1[0]/GP4[0]	I/O	IPD	McASP1 serial data
2	UART0_RXD/I2C0_SDA/TM64P0_IN12/GP5[8]/ BOOT[8]	I	IPU	BOOT[8]
		I	IPU	UART0 receive data
		I/O	IPU	I2C0 serial data
		I	IPU	Timer0 lower input
3	UART0_TXD/I2C0_SCL/TM64P0_OUT12/GP5[9]/ BOOT[9]	I	IPU	BOOT[9]
		O	IPU	UART0 transmit data
		I/O	IPU	I2C0 serial clock
		O	IPU	Timer0 lower output
4	AXR1[10]/GP5[10]	I/O	IPU	McASP1 serial data
5	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
6	AXR1[11]/GP5[11]	I/O	IPU	McASP1 serial data
7	SPI1_ENA /UART2_RXD/GP5[12]	I/O	IPU	SPI1 enable
		I	IPU	UART2 receive data
8	SPI1_SCS[0] /UART2_TXD/GP5[13]	I/O	IPU	SPI1 chip select
		O	IPU	UART2 transmit data
9	SPI0_SCS[0] /UART0_RTS/EQEP0B/GP5[4]/BOOT[4]	I/O	IPU	SPI0 chip select
		I	IPU	eQEP0B quadrature input
		I	IPU	BOOT[4]
		O	IPU	UART0 ready-to-send output
10	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
11	SPI0_CLK/EQEP1I/GP5[2]/BOOT[2]	I/O	IPD	SPI0 clock
		I	IPD	eQEP1 index
		I	IPD	BOOT[2]
12	SPI0_ENA /UART0_CTS/EQEP0A/GP5[3]/BOOT[3]	I/O	IPU	SPI0 enable
		I	IPU	eQEP0A quadrature input
		I	IPU	BOOT[3]
		I	IPU	UART0 clear-to-send input
13	SPI1_SOMI[0]/I2C1_SCL/GP5[5]/BOOT[5]	I/O	IPU	SPI1 data/slave-out-master-in
		I	IPU	BOOT[5]
		I/O	IPU	I2C1 serial clock
14	SPI1_SIMO[0]/I2C1_SDA/GP5[6]/BOOT[6]	I/O	IPU	SPI1 data/slave-in-master-out
		I	IPU	BOOT[6]
		I/O	IPU	I2C1 serial Data
15	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
16	SPI1_CLK/EQEP1S/GP5[7]/BOOT[7]	I/O	IPD	SPI1 clock
		I	IPD	eQEP1 strobe
		I	IPD	BOOT[7]
17	SPI0_SOMI[0]/EQEP0I/GP5[0]/BOOT[0]	I/O	IPD	SPI0 data/slave-out-master-in
		I	IPD	eQEP0 index
		I	IPD	BOOT[0]
18	SPI0_SIMO[0]/EQEP0S/GP5[1]/BOOT[1]	I/O	IPD	SPI0 data/slave-in-master-out
		I	IPD	eQEP0 strobe
		I	IPD	BOOT[1]
19	EMA_WAIT[0]/ UHPI_HRDY/GP2[10]	I	IPU	EMIFA wait input/interrupt
		I/O	IPU	UHPI ready
20	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
21	EMA_CS[3] /AMUTE2/GP2[6]	O	IPU	EMIFA Async chip select
		O	IPU	McASP2 mute output
22	EMA_OE /UHPI_HDS1/AXR0[13]/GP2[7]	O	IPU	EMIFA output enable
		I/O	IPU	UHPI data strobe
23	EMA_CS[2] /UHPI_HCS/GP2[5]/BOOT[15]	O	IPU	EMIFA Async chip select
		I	IPU	BOOT[15]
		I/O	IPU	UHPI chip select
24	EMA_OE/UHPI_HDS1/AXR0[13]/GP2[7]	I/O	IPU	McASP0 serial data
	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
25	EMA_BA[0]/ GP1[14]	O	IPU	EMIFA bank address
26	EMA_BA[1]/ UHPI_HHWIL/GP1[13]	O	IPU	EMIFA bank address
		I/O	IPU	UHPI half-word identification control

Pin No.	Function Name	TYPE (1)	PULL (2)	Detail of Function
27	EMA_A[10]/ GP1[10]	O	IPU	EMIFA address bus
28	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
29	EMA_A[0]/ GP1[0]	O	IPD	EMIFA address bus
30	EMA_A[1]/MMCSD_CLK/UHPI_HCNTL0/GP1[1]	O	IPU	EMIFA address bus
		I/O	IPU	UHPI access control
		O	IPU	MMCSD_CLK
31	EMA_A[2]/MMCSD_CMD/UHPI_HCNTL1/GP1[2]	O	IPU	EMIFA address bus
		I/O	IPU	UHPI access control
		I/O	IPU	MMCSD_CMD
32	EMA_A[3]/ GP1[3]	O	IPD	EMIFA address bus
33	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
34	EMA_A[4]/ GP1[4]	O	IPD	EMIFA address bus
35	EMA_A[5]/ GP1[5]	O	IPD	EMIFA address bus
36	EMA_A[6]/ GP1[6]	O	IPD	EMIFA address bus
37	EMA_A[7]/ GP1[7]	O	IPD	EMIFA address bus
38	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
39	EMA_A[8]/ GP1[8]	O	IPU	EMIFA address bus
40	EMA_A[9]/ GP1[9]	O	IPU	EMIFA address bus
41	EMA_A[11]/ GP1[11]	O	IPU	EMIFA address bus
42	EMA_A[12]/ GP1[12]	O	IPU	EMIFA address bus
43	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
44	EMA_D[0]/MMCSD_DAT[0]/UHPI_HD[0]/GP0[0]/ BOOT[12]	I/O	IPU	EMIFA data bus
		I	IPU	BOOT[12]
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
45	EMA_D[1]/MMCSD_DAT[1]/UHPI_HD[1]/GP0[1]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
46	EMA_D[2]/MMCSD_DAT[2]/UHPI_HD[2]/GP0[2]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
47	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
48	EMA_D[3]/MMCSD_DAT[3]/UHPI_HD[3]/GP0[3]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
49	EMA_D[4]/MMCSD_DAT[4]/UHPI_HD[4]/GP0[4]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
50	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
51	EMA_D[5]/MMCSD_DAT[5]/UHPI_HD[5]/GP0[5]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
52	EMA_D[6]/MMCSD_DAT[6]/UHPI_HD[6]/GP0[6]	I/O	IPU	EMIFA data bus
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
53	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
54	EMA_D[7]/MMCSD_DAT[7]/UHPI_HD[7]/GP0[7]/ BOOT[13]	I/O	IPU	EMIFA data bus
		I	IPU	BOOT[13]
		I/O	IPU	UHPI data bus
		I/O	IPU	MMC/SD data
55	EMA_WE /UHPI_HRW/AXR0[12]/GP2[3]/BOOT[14]	O	IPU	EMIFA SDRAM write enable
		I	IPU	BOOT[14]
		I/O	IPU	UHPI read/write
		I/O	IPU	McASP0 serial data
56	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
57	EMB_CAS	O	IPU	EMIFB column address strobe
58	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
59	EMB_WE	O	IPU	EMIFB write enable
60	EMB_WE_DQM[0] /GP5[15]	O	IPU	EMIFB write enable/data mask for EMB_D.

Pin No.	Function Name	TYPE (1)	PULL (2)	Detail of Function
61	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
62	EMB_D[7]/GP6[7]	I/O	IPD	EMIFB SDRAM data bus
63	EMB_D[6]/GP6[6]	I/O	IPD	EMIFB SDRAM data bus
64	EMB_D[5]/GP6[5]	I/O	IPD	EMIFB SDRAM data bus
65	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
66	EMB_D[4]/GP6[4]	I/O	IPD	EMIFB SDRAM data bus
67	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
68	EMB_D[3]/GP6[3]	I/O	IPD	EMIFB SDRAM data bus
69	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
70	EMB_D[2]/GP6[2]	I/O	IPD	EMIFB SDRAM data bus
71	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
72	EMB_D[1]/GP6[1]	I/O	IPD	EMIFB SDRAM data bus
73	EMB_D[0]/GP6[0]	I/O	IPD	EMIFB SDRAM data bus
74	EMB_D[15]/GP6[15]	I/O	IPD	EMIFB SDRAM data bus
75	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
76	EMB_D[14]/GP6[14]	I/O	IPD	EMIFB SDRAM data bus
77	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
78	EMB_D[13]/GP6[13]	I/O	IPD	EMIFB SDRAM data bus
79	EMB_D[12]/GP6[12]	I/O	IPD	EMIFB SDRAM data bus
80	EMB_D[11]/GP6[11]	I/O	IPD	EMIFB SDRAM data bus
81	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
82	EMB_D[10]/GP6[10]	I/O	IPD	EMIFB SDRAM data bus
83	EMB_D[9]/GP6[9]	I/O	IPD	EMIFB SDRAM data bus
84	EMB_D[8]/GP6[8]	I/O	IPD	EMIFB SDRAM data bus
85	EMB_WE_DQM[1] /GP5[14]	O	IPU	EMIFB write enable/data mask for EMB_D
86	EMB_CLK	O	IPU	EMIF SDRAM clock
87	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
88	EMB_SDCKE	I/O	IPU	EMIFB SDRAM clock enable
89	EMB_A[12]/GP3[13]	O	IPD	EMIFB SDRAM row/column address bus
90	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
91	EMB_A[11]/GP7[13]	O	IPD	EMIFB SDRAM row/column address bus
92	EMB_A[9]/GP7[11]	O	IPD	EMIFB SDRAM row/column address bus
93	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
94	EMB_A[8]/GP7[10]	O	IPD	EMIFB SDRAM row/column address bus
95	EMB_A[7]/GP7[9]	O	IPD	EMIFB SDRAM row/column address bus
96	EMB_A[6]/GP7[8]	O	IPD	EMIFB SDRAM row/column address bus
97	EMB_A[5]/GP7[7]	O	IPD	EMIFB SDRAM row/column address bus
98	EMB_A[4]/GP7[6]	O	IPD	EMIFB SDRAM row/column address
99	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
100	EMB_A[3]/GP7[5]	O	IPD	EMIFB SDRAM row/column address
101	EMB_A[2]/GP7[4]	O	IPD	EMIFB SDRAM row/column address
102	EMB_A[1]/GP7[3]	O	IPD	EMIFB SDRAM row/column address
103	EMB_A[0]/GP7[2]	O	IPD	EMIFB SDRAM row/column address
104	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
105	EMB_A[10]/GP7[12]	O	IPD	EMIFB SDRAM row/column address bus
106	EMB_BA[1]/GP7[0]	O	IPU	EMIFB SDRAM bank address
107	EMB_BA[0]/GP7[1]	O	IPU	EMIFB SDRAM bank address
108	EMB_CS[0]	O	IPU	EMIFB SDRAM chip select 0
109	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
110	EMB_RAS	O	IPU	EMIFB SDRAM row address strobe
111	AXR0[0]/AFSR2/GP3[0]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 serial data
112	AXR0[1]/ACLKX2/GP3[1]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 transmit bit clock
113	AXR0[2]/AXR2[3]/GP3[2]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 serial data
114	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
115	AXR0[3]/AXR2[2]/GP3[3]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 serial data

Pin No.	Function Name	TYPE (1)	PULL (2)	Detail of Function
116	AXR0[4]/ AXR2[1]/GP3[4]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 serial data
117	AXR0[5]/AFSX2/GP3[5]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 transmit frame sync
118	AXR0[6]/ACLKR2/GP3[6]	I/O	IPD	McASP0 serial data
		I/O	IPD	McASP2 receive bit clock
119	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
120	AXR0[7]/GP3[7]	I/O	IPD	McASP0 serial data
121	AXR0[8]/GP3[8]	I/O	IPU	McASP0 serial data
122	UART1_RXD/AXR0[9]/GP3[9]	I	IPD	UART1 receive data
	(3)	I/O	IPD	McASP0 serial data
123	UART1_TXD/AXR0[10]/GP3[10]	O	IPD	UART1 transmit data
	(3)	I/O	IPD	McASP0 serial data
124	AXR0[11]/ AXR2[0]/GP3[11]	I/O	IPD	McASP0 serial data
		O	IPD	McASP2 serial data
125	AHCLKX0/AHCLKX2/USB_REFCLKIN/GP2[11]	I/O	IPD	McASP0 transmit master clock
		O	IPD	McASP2 transmit master clock
		I	IPD	USB_REFCLKIN. Optional 48 MHz clock input
126	ACLKX0/ECAP0/APWM0/GP2[12]	I/O	IPD	Enhanced capture 0/input or auxiliary PWM 0 output
		I/O	IPD	McASP0 transmit bit clock
127	AFSX0/GP2[13]/BOOT[10]	I	IPD	BOOT[10]
		I/O	IPD	McASP0 transmit frame sync
128	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
129	AHCLKR0/GP2[14]/BOOT[11]	I	IPD	BOOT[11]
		I/O	IPD	McASP0 receive master clock
130	ACLKR0/ECAP1/APWM1/GP2[15]	I/O	IPD	Enhanced capture 1/input or auxiliary PWM 1 output
		I/O	IPD	McASP0 receive bit clock
131	AFSR0/GP3[12]	I/O	IPD	McASP0 receive frame sync
132	AMUTE1/EPWMTZ/GP4[14]	I/O	IPD	eHRPWM0 trip zone input
		I/O	IPD	eHRPWM1 trip zone input
		I/O	IPD	eHRPWM2 trip zone input
		O	IPD	McASP1 mute output
133	RSV2	PWR		Reserved. For proper device operation, this pin must be tied directly to CVDD
134	USB0_VDDA12 (4)	PWR		USB0 PHY 1.2-V LDO output for bypass cap
135	USB0_VDDA18	PWR		USB0 PHY 1.8-V supply input
136	NC	–		–
137	USB0_DP	A		USB0 PHY data plus
138	USB0_DM	A		USB0 PHY data minus
139	NC	–		–
140	USB0_VDDA33	PWR		USB0 PHY 3.3-V supply
141	PLL0_VDDA	PWR		PLL analog VDD (1.2-V filtered supply)
142	PLL0_VSSA	GND		PLL analog VSS (for filter)
143	OSCIN	I		Oscillator input
144	OSCVSS	GND		Oscillator ground (for filter only)
145	OSCOUT	O		Oscillator output
146	RESET	I		Device reset input
147	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
148	RTC_XI	I		Low-frequency (32-kHz) oscillator receiver for real-time clock
149	RTC_CVDD	PWR		RTC module core power (isolated from rest of chip CVDD)
150	TRST	I	IPD	JTAG test reset
151	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
152	TMS	I	IPU	JTAG test mode select
153	TDI	I	IPU	JTAG test data input
154	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
155	TCK	I	IPU	JTAG test clock
156	TDO	O	IPD	JTAG test data output
157	GP7[14] (5)	I/O	IPD	General-Purpose IO signal
158	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
159	CVDD (Core supply)	PWR		1.2-V core supply voltage pins

Pin No.	Function Name	TYPE (1)	PULL (2)	Detail of Function
160	AHCLKX1/EPWM0B/GP3[14]	I/O	IPD	eHRPWM0 B output
		I/O	IPD	McASP1 transmit master clock
161	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
162	ACLKX1/EPWM0A/GP3[15]	I/O	IPD	eHRPWM0 A output
		I/O	IPD	McASP1transmit bit clock
163	AFSX1/EPWMSYNCI/EPWMSYNCO/GP4[10]	I/O	IPD	Sync input to eHRPWM0 module or sync output to external PWM
		I/O	IPD	McASP1 transmit frame sync
164	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
165	ACLKR1/ECAP2/APWM2/GP4[12]	I/O	IPD	enhanced capture 2/input or auxiliary PWM 2 output
		I/O	IPD	McASP1 receive bit clock
166	AFSR1/GP4[13]	I/O	IPD	McASP1 receive frame sync
167	CVDD (Core supply)	PWR		1.2-V core supply voltage pins
168	AXR1[8]/EPWM1A/GP4[8]	I/O	IPD	eHRPWM1 A (with high-resolution)
		I/O	IPD	McASP1 serial data
169	AXR1[7]/EPWM1B/GP4[7]	I/O	IPD	eHRPWM1 B
		I/O	IPD	McASP1 serial data
170	AXR1[6]/EPWM2A/GP4[6]	I/O	IPD	eHRPWM2 A (with high-resolution)
		I/O	IPD	McASP1 serial data
171	AXR1[5]/EPWM2B/GP4[5]	I/O	IPD	eHRPWM2 B
		I/O	IPD	McASP1 serial data
172	DVDD (I/O supply)	PWR		3.3-V I/O supply voltage pins
173	AXR1[4]/EQEP1B/GP4[4]	I	IPD	eQEP1B quadrature input
		I/O	IPD	McASP1 serial data
174	AXR1[3]/EQEP1A/GP4[3]	I	IPD	eQEP1A quadrature input
		I/O	IPD	McASP1 serial data
175	AXR1[2]/GP4[2]	I/O	IPD	McASP1 serial data
176	AXR1[1]/GP4[1]	I/O	IPD	McASP1 serial data

(1) I = Input, O = Output, I/O = Bidirectional, Z = High impedance, PWR = Supply voltage, GND = Ground, A = Analog signal.

Note: The pin type shown refers to the input, output or high-impedance state of the pin function when configured as the the signal name highlighted in bold. All multiplexed signals may enter a high-impedance state when the configured function is input-only or the configured function supports high-Z operation. All GPIO signals can be used as input or output. For multiplexed pins where functions have different types (ie., input versus output), the table reflects the pin function direction for that particular peripheral.

(2) IPD = Internal Pulldown resistor, IPU = Internal Pullup resistor

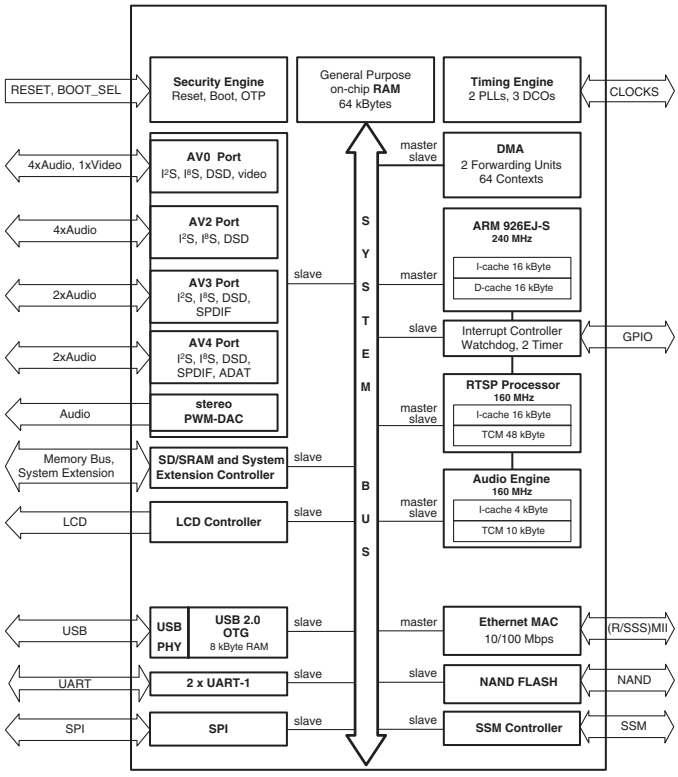
(3) 122, 123 pin: As these signals are internally pulled down while the device is in reset, it is necessary to externally pull them high with resistors if UART1 boot mode is used.

(4) 134 pin: Core power supply LDO output for USB PHY. This pin must be connected via a 0.22-mF capacitor to VSS. When the USB peripheral is not used, the USB_VDDA12 signal should still be connected via a 1-mF capacitor to VSS.

(5) 157 pin: GP7[14] is initially configured as a reserved function after reset and will not be in a predictable state. This signal will only be stable after the GPIO configuration for this pin has been completed. Users should carefully consider the system implications of this pin being in an unknown state after reset.

IC951: DM860A (DIGITAL P.C.B.)
Network microprocessor

* **No replacement part available.**



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
A	USBDN	VDD33 USBC	VSS33 USBC	n.c.	n.c.	VDD33	RFCLKP	RFRXQP	RFRXIP	HIGHZ	SSMD0	SSMD4	SSMCMD	RXD1	TDO	TDI	A0	A1	A
B	USBDP	VDD33 USBT	VSS33 USBT	n.c.	n.c.	VSS	RFCLKN	RFRXQN	RFRXIN	TEST1	SSMD1	SSMD5	TXD1	RXD0	TMS	SPICLK	SPINCS1	A2	B
C	VSS12 USB	USBREXT	USBXO	USBXI	NRES12 OUT	VSS	RREF	n.c.	n.c.	SSMCLK	SSMD2	SSMD6	TXD0	TCK	SPINCS0	A3	A4	A5	C
D	VDD12 USB	USBVBUS	USBATST	NRES33 OUT	NRES33 REF	NRES12 REF	VDD33	VDD12	SSMWP	SSMCP	SSMD3	SSMD7	NRESET	SPIDI	SPIDO	A6	A7	A8	D
E	VSS33 RTC	USBID	USBVB USDRV	NC		VDD12 CORE	VDD12 CORE	VDD33IO	VDD33IO	VDD12 CORE	VDD12 CORE	VDD33IO	VDD33IO		A9	A10	A11	A12	E
F	VDD33 RTC	RTCXIN	VDD33 PLL	NC	VDD33IO	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD12 CORE	A13_RAS	A14_CAS	A15_BA0	A16_BA1	F
G	VDD12 DCO	RTCXOUT	VSS33 PLL	NC	VDD33IO	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD12 CORE	A17_DQ M0	A18_DQ M1	A19	A20	G
H	VSS12 DCO	VSS12 PLL	VDD12 PLL	NC	VDD12 CORE	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD33IO	A21	A22	A23	NCS3	H
J	PDOUT1	VCO1	XTALO	NC	VDD12 CORE	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD33IO	NCS0	NCS1	NCS2	MEMCKE	J
K	PDOUT0	VCO0	XTALI	AOUTLP	VDD33IO	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD12 CORE	MEMCLK	NWE	NOE	NWAIT	K
L	AV0CLK	AOUTLN	AOUTRN	AOUTRP	VDD33IO	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD12 CORE	D3	D2	D1	D0	L
M	AV0 CTRL0	AV0 CTRL1	AV0 CTRL2	AV0 DATA3	VDD12 CORE	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD33IO	D7	D6	D5	D4	M
N	AV0 DATA2	AV0 DATA1	AV0 DATA0	AV1 DATA3	VDD12 CORE	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VSS	VDD33IO	D11	D10	D9	D8	N
P	AV1 DATA2	AV1 DATA1	AV1 DATA0	AV2 DATA3		VDD33IO	VDD33IO	VDD12 CORE	VDD12 CORE	VDD33IO	VDD33IO	VDD12 CORE	VDD12 CORE		FD0	FD1	D13	D12	P
R	AV2CLK	AV2 CTRL1	AV2 DATA2	AV3CLK	AV3 DATA1	LCDD11	LCDD7	LCDD3	LCD CTRL0	VPP	MIITXEN	MIITXCLK	MIIRXER	MIICRS	FD2	FD3	FD4	D14	R
T	AV2 CTRL0	AV2 DATA1	AV3 CTRL1	AV3 DATA0	LCDD14	LCDD10	LCDD6	LCDD2	LCD CTRL1	LCDCLK	MIIITXER	MIIRXCLK	MIICOL	MII RXDV	FD5	FD6	FD7	D15	T
U	AV2 DATA0	AV3 CTRL0	AV4 DATA1	LCDD16	LCDD13	LCDD9	LCDD5	LCDD1	LCD CTRL2	MIITXD0	MIITXD2	MIIRXD0	MIIRXD2	MIIMDIO	NFCE0	FCLE	NFWE	NFRB	U
V	NC	AV4 DATA0	LCDD17	LCDD15	LCDD12	LCDD8	LCDD4	LCDD0	LCD CTRL3	MIITXD1	MIITXD3	MIIRXD1	MIIRXD3	MIIMDC	MIIPHY CLK	NFWP	NFRE	FALE	V
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	

AV-Port 0

Pin No.	Function Name	I/O	Detail of Function
M4	AV0DATA[3:0]	I/O	Audio/video data. Several formats are supported.
N1			
N2			
N3			
N4	AV1DATA[3:0]	I/O	Video data, together with AV0DATA[3:0]: AV0DATA[3:0] = video[3:0] AV1DATA[3:0] = video[7:4]
P1			
P2			
P3			
L1	AV0CLK	I/O	Data clock. Depending on the AV-Port 0 configuration, this clock is a bit- or byte-clock which is used to transmit or receive the AV0DATA[*] synchronously.
M1	AV0CTRL0	I/O	Configurable sync signal: • Serial audio formats: LRCK input or output. • Video formats: PSYNC input or output.
M2	AV0CTRL1	I/O	Configurable sync signal: • Serial audio formats: Master clock output. • Video formats: DVALID input or output.
M3	AV0CTRL2	I/O	Configurable sync signal: • Video formats: FSYNC input or output.

AV-Port 2

Pin No.	Function Name	I/O	Detail of Function
P4	AV2DATA[3:0]	I/O	Audio data. Several formats are supported.
R3			
T2			
U1			
R1	AV2CLK	I/O	Data clock. Depending on the AV-Port 2 configuration this clock is a bit-clock which is used to transmit or receive the AV2DATA[*] synchronously.
T1	AV2CTRL0	I/O	Configurable sync signal: Serial audio formats: LRCK input or output.
R2	AV2CTRL1	I/O	Configurable sync signal: Serial audio formats: Master clock output.

AV-Port 3

Pin No.	Function Name	I/O	Detail of Function
R5	AV3DATA[1:0]	I/O	Audio data. Several formats are supported.
T4			
R4	AV3CLK	I/O	Data clock. Depending on the AV-Port 3 configuration this clock is a bit-clock which is used to transmit or receive the AV3DATA[*] synchronously.
U2	AV3CTRL0	I/O	Configurable sync signal: Serial audio formats: LRCK input or output.
T3	AV3CTRL1	I/O	Configurable sync signal: Serial audio formats: Master clock output.

AV-Port 4

Pin No.	Function Name	I/O	Detail of Function
U3	AV4DATA[1:0]	I/O	Audio data. Several formats are supported.
V2			

PWM-DAC

Pin No.	Function Name	I/O	Detail of Function
K4	AOUTLP	O	Left channel PWM output (positive).
L2	AOUTLN	O	Left channel PWM output (negative).
L4	AOUTRP	O	Right channel PWM output (positive).
L3	AOUTRN	O	Right channel PWM output (negative).

UART Interface

Pin No.	Function Name	I/O	Detail of Function
B14	RXD0	I	UART-0 receive signal.
C13	TXD0	O	UART-0 transmit signal.
A14	RXD1	I	UART-1 receive signal.
B13	TXD1	O	UART-1 transmit signal.

Serial Peripheral Interface (SPI)

Pin No.	Function Name	I/O	Detail of Function
D14	SPIDIN	I	SPI data receive.
D15	SPIDOUT	O	SPI data transmit.
B16	SPICLK	I/O	SPI clock.
C15	SPINCS0	I/O	Multi-master mode: Chip-select input (used to detect bus conflict). Master only mode: Chip-select 1 output. Slave mode: Chip-select input.
B17	SPINCS1	I/O	Multi-master mode: Chip-select 2 output. Master only mode: Chip-select 2 output. Slave mode: Not used.

External Memory Interface

Pin No.	Function Name	I/O	Detail of Function
T18 R18 P17 P18 N15 N16 N17 N18 M15 M16 M17 M18 L15 L16 L17 L18	D[15:0]	I/O	Data bus for external memory and peripheral access.
E18 E17 E16 E15 D18 D17 D16 C18 C17 C16 B18 A18 A17	A[12:0]	O	Address bus for external memory and peripheral access.
F15	A13_RAS	O	SRAM: Address output SDRAM: Row access strobe
F16	A14_CAS	O	SRAM: Address output SDRAM: Column access strobe
F17	A15_BA0	O	SRAM: Address output SDRAM: Bank select
F18	A16_BA1	O	SRAM: Address output SDRAM: Bank select
G15	A17_DQM0	O	SRAM: Address output SDRAM: Data mask
G16	A18_DQM1	O	SRAM: Address output SDRAM: Data mask
H17 H16 H15 G18 G17	A[23:19]	O	Address bus for external memory and peripheral access.

Pin No.	Function Name	I/O	Detail of Function
H18	NCS[3:0]	O	Chip select signals. The active memory range for NCS[n] (active low) can be configured. • NCS[0] supports SRAM, can be used for booting. • NCS[1] supports SDRAM or SRAM. • NCS[2] supports SRAM. • NCS[3] supports SRAM.
J17			
J16			
J15			
K17	NOE	O	Output enable, asserted (low) for read operations.
K16	NWE	O	Write enable, asserted (low) for write operations.
K18	NWAIT	I	External wait line. If NWAIT is asserted, memory access will be stalled. Can be configured as either low-active (default) or high-active.
K15	MEMCLK	O	SDRAM system clock.
J18	MEMCKE	O	SDRAM clock enable.

NAND-Flash Interface

Pin No.	Function Name	I/O	Detail of Function
T17	FD[7:0]	I/O	Bi-directional data bus.
T16			
T15			
R17			
R16			
R15			
P16			
P15			
V18	FALE	O	Address latch enable; pull-up/down defines boot mode.
U16	FCLE	O	Command latch enable; pull-up/down defines boot mode.
U15	NFCE0	O	Chip-enable, low-active.
U18	NFRB	I	Ready/busy. NAND flash is busy when NFRB is low.
V17	NFRE	O	Read enable, low-active.
U17	NFWE	O	Write enable, low-active.
V16	NFWP	O	Write protect, low-active.

Ethernet MAC-Phy Interface (MII)

Pin No.	Function Name	I/O	MII	RMII	SMII
U14	MIIDIO	I/O	Management data	Management data	
V14	MIIMDC	O	Management clock	Management clock	
V13	MIIRXD[3]	I	RxD 3	RxD 1	
U13	MIIRXD[2]	I	RxD 2	RxD 0	
V12	MIIRXD[1]	I	RxD 1		Rx-Sync
U12	MIIRXD[0]	I	RxD 0		RxD
T12	MIIRXCLK	I	Receive clock		Receive clock
R13	MIIRXER	I	Receive error	Receive error	
T14	MIIRXDV	I	Receive data valid	Carrier sense/data valid	
V11	MIITXD[3]	O	TxD 3	TxD 1	
U11	MIITXD[2]	O	TxD 2	TxD 0	
V10	MIITXD[1]	O	TxD 1		Tx-Sync
U10	MIITXD[0]	O	TxD 0		TxD
R12	MIITXCLK	I	Transmit clock		Transmit clock
T11	MIITXER	O	Transmit error		
R11	MIITXEN	O	Transmit data enable	Transmit data enable	
T13	MIICOL	I	MII ethernet collision		
R14	MIICRS	I	MII carrier sense		
V15	MIIPHYCLK	O	25.000 MHz clock	50.000 MHz clock	125.000 MHz clock

USB 2.0 OTG

Pin No.	Function Name	I/O	Detail of Function
B1	USBD+	I/O	Positive data line that is connected to the serial USB cable.
A1	USBD–	I/O	Negative data line that is connected to the serial USB cable.
E2	USBID	I	USB ID pin of mini-AB receptacle.
C2	USBREXT	I	External bias resistor (2K7, 1%); connect resistor to VSSUSB.
D2	USBVBUS	I	VBUS voltage sense.
E3	USBVBUSDRV	O	Control signal to control VBUS 5V voltage source.
C4	USBXTALI	I	Oscillator circuit input for a 24.000 MHz crystal (optional). Without external crystal, pull this pin to GND.
C3	USBXTALO	O	Oscillator circuit output for a 24.000 MHz crystal (optional). Without external crystal, leave this pin open.
D3	USBATST	–	Do not connect.

Power-on Reset Pins

Pin No.	Function Name	I/O	Detail of Function
D6	NRES12REF	I	Voltage reference input. NRES12OUT is release when this input voltage exceeds VTH12.
C5	NRES12OUT	O	Open-drain reset (active low) for 1.2V core power supply.
D5	NRES33REF	I	Voltage reference input. NRES33OUT is release when this input voltage exceeds VTH33.
D4	NRES33OUT	O	Open-drain reset (active low) for 3.3V core power supply

Real-Time Clock (RTC) Pins (RTC is Not Supported)

Pin No.	Function Name	I/O	Detail of Function
F2	RTCXIN	I	No connection. Leave this pin open circuit.
G2	RTCXOUT	O	No connection. Leave this pin open circuit.
F1	VDD33RTC	Power	No connection. Leave this pin open circuit.
E1	VSS33RTC	Power	Ground (0 V) for RTC

LCD Interface

Pin No.	Function Name	I/O	TFT Mode	LCD STN monochr.	LCD STN monochr. (double)	LCD STN color	LCD STN color (bias)
V3	LCDD[17]	O	RED5				
U4	LCDD[16]	O	RED4				
V4	LCDD[15]	O	RED3				
T5	LCDD[14]	O	RED2				
U5	LCDD[13]	O	RED1				
V5	LCDD[12]	O	(RED0)				
R6	LCDD[11]	O	GREEN5				
T6	LCDD[10]	O	GREEN4				
U6	LCDD[9]	O	GREEN3				
V6	LCDD[8]	O	GREEN2				
R7	LCDD[7]	O	GREEN1		DATAHIGH3	DATA7	DATA7
T7	LCDD[6]	O	GREEN0		DATAHIGH2	DATA6	DATA6
U7	LCDD[5]	O	BLUE5		DATAHIGH1	DATA5	DATA5
V7	LCDD[4]	O	BLUE4		DATAHIGH0	DATA4	DATA4
R8	LCDD[3]	O	BLUE3	DATA3	DATALOW3	DATA3	DATA3
T8	LCDD[2]	O	BLUE2	DATA2	DATALOW2	DATA2	DATA2
U8	LCDD[1]	O	BLUE1	DATA1	DATALOW1	DATA1	DATA1
V8	LCDD[0]	O	(BLUE0)	DATA0	DATALOW0	DATA0	DATA0
T10	LCDCLK	O	Byte clock	CL2	CL2	CL2	CL2
V9	LCDCTRL[3]	O	Display off	Display off	Display off	Display off	Display off
U9	LCDCTRL[2]	O	Vsync	FLM	FLM	FLM	FLM
T9	LCDCTRL[1]	O	HSync	CL1	CL1	CL1	CL1
R9	LCDCTRL[0]	O	DVALID			M/Bias	

SSM Interface

Pin No.	Function Name	I/O	Detail of Function
D12	SSMD[7:0]	I/O	Data lines.
C12			
B12			
A12			
D11			
C11			
B11			
A11			
C10	SSMCLK	O	Clock output.
A13	SSMCMD	O	Command output.
D10	SSMCP	I	Card power input (high = off).
D9	SSMWP	I	Write protect input (low = protect).

External PLL Pins

Pin No.	Function Name	I/O	Detail of Function
J2	VCO[1:0]	I	External oscillator inputs, typically coming from an external VCO. Together with the external loop-filter and the internal clock dividers, each PDOUT/VCO pair can form a complete PLL.
K2			
J1	PDOUT[1:0]	O	Phase discriminator outputs. These signals are charge-pump type outputs.
K1			Each of them can be used to feed the loop-filter of a PLL structure.

Global Pins

Pin No.	Function Name	I/O	Detail of Function
D13	NRESET	I	Reset (active low). When asserted, the chip is placed in the reset state and the peripheral pins are configured as inputs. After deassertion of NRESET, the chip is clocked by XTALI and starts booting from the port configured by the FCLE, FALE pins. The NRESET signal must be asserted after power-up.
K3	XTALI	I	Oscillator circuit input. Internal system clock will be derived from XTALI (internal clock multiplier).
J3	XTALO	O	Oscillator circuit output.
C7	RREF	I	Reference current. Connect a 3.0 k-ohms ±1% resistor to GND.
B10	TEST1	I	Reserved. Connect to VDD for normal operation.
A10	HIGHZ	I	Reserved. Connect to VDD for normal operation.
E4	n.c.	–	Pins must be left unconnected (18x).
F4			
G4			
H4			
J4			
V1			
A4			
A5			
B4			
B5			
C8			
C9			

JTAG Interface

Pin No.	Function Name	I/O	Detail of Function
B15	TMS	I	JTAG mode select.
C14	TCK	I	JTAG clock.
A16	TDI	I	JTAG serial data input.
A15	TDO	O	JTAG serial data output.

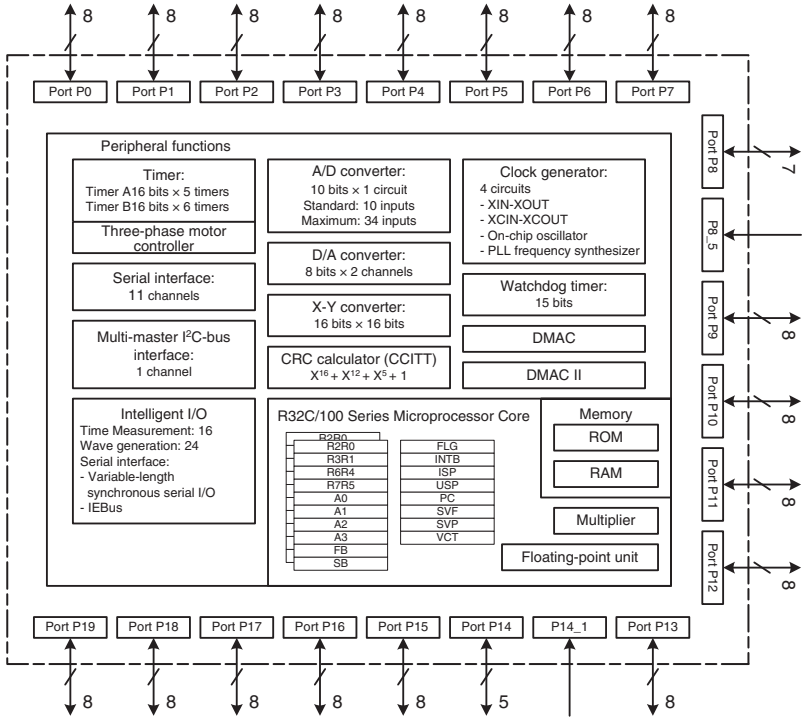
Power Supply Pins

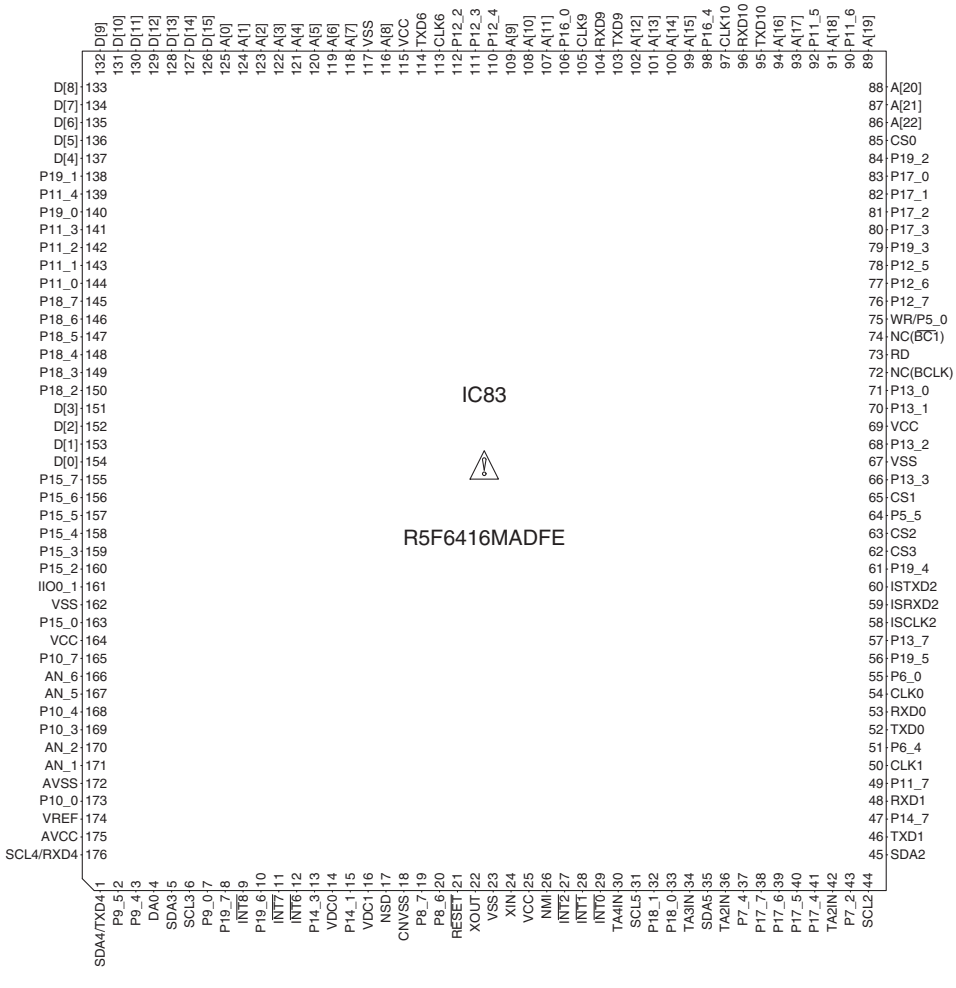
Pin No.	Function Name	Detail of Function
A6	VDD33	I/O power supply (+3.3 V).
E8		
E9		
E12		
E13		
F5		
G5		
H14		
J14		
K5		
L5		
M14		
N14		
P6		
P7		
P10		
P11		
D7		
F6	VSS	Ground (0 V).
F7		
F8		
F9		
F10		
F11		
F12		
F13		
G6		
G7		
G8		
G9		
G10		
G11		
G12		
G13		
H6		
H7		
H8		
H9		
H10		
H11		
H12		
H13		
J6		
J7		
J8		
J9		
J10		
J11		
J12		
J13		
K6		
K7		
K8		
K9		
K10		
K11		
K12		

Pin No.	Function Name	Detail of Function
K13	VSS	Ground (0 V).
L6		
L7		
L8		
L9		
L10		
L11		
L12		
L13		
M6		
M7		
M8		
M9		
M10		
M11		
M12		
M13		
N6		
N7		
N8		
N9		
N10		
N11		
N12		
N13		
B6		
C6		
R10	VPP	
A2	VDD33USB	Power supply (+3.3 V) for USB interface.
B2		
A3	VSS33USB	Ground (0 V).
B3		
F3	VDD33PLL	Power supply (+3.3V) for PLL.
G3	VSS33PLL	Ground (0 V).
E6	VDD12	Power supply (+1.2V).
E7		
E10		
E11		
F14		
G14		
H5		
J5		
K14		
L14		
M5		
N5		
P8		
P9		
P12		
P13		
D8		
D1	VDD12USB	Power supply (+1.2V) for USB interface.
C1	VSS12USB	Ground (0 V).
H3	VDD12PLL	Power supply (+1.2V) for PLL.
H2	VSS12PLL	Ground (0 V).
G1	VDD12DCO	Power supply (+1.2V) for DCO.
H1	VSS12DCO	Ground (0 V).

IC83: R5F6416MADFE (DIGITAL P.C.B.)
Microprocessor

*** No replacement part available.**





Pin No.	Port Name	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
1	SRXD4/SDA4/TXD4/ANEX1/P9_6	TUN_SDA	I/O	O	Tuner I2C data
		HDR_MOSI	O	O	HD Radio transmission data
2	CLK4/ANEX0/P9_5	VOL1_SCK	O	O	VOL1 (R2A15220FP #1) communication clock
3	N_CTS4/N_N_RTS4/N_SS4/TB4IN/DA1/P9_4	VOL_MOSI	O	O	VOL1/VOL2/VOL3 communication data
4	N_CTS3/N_N_RTS3/N_SS3/TB3IN/DA0/P9_3	AMP_LMT	O	I	Limiter control
5	IEOUT/ISTXD2/OUTC2_0/SRXD3/SDA3/TXD3/TB2IN/P9_2	HDMI_SDA	I/O	O	HDMI 400k I2C data
6	IEIN/ISRXD2/STXD3/SCL3/RXD3/TB1IN/P9_1	HDMI_SCL	O	O	HDMI 400k I2C clock
7	CLK3/TB0IN/P9_0	SPRY_5CH	O	O	SP relay 5CH (L, C, R, SRL, SRR)
8	P19_7	PA_B_RY	O	O	Power amplifier B power supply control
9	N_INT8/P14_6	HAU_N_INT	I	O	Mute signal from HDMI, RX1 and RX2
10	P19_6	FLD_N_RST	O	O	FLD reset
11	N_INT7/P14_5	HTX1_N_INT	I	O	HDMI TX CEC interrupt
12	N_INT6/P14_4	PWR_DET	I	I	AC power detect
13	P14_3	FLD_N_CS	O	O	FLD chip select
14	VDC0	VDC0			---
15	P14_1 (for exclusive use of the input)	I_PRT	I	I	Current protection
16	VDC1	VDC1			---
17	NSD	NSD			Debugger
18	CNVSS	DBG_CNVSS			---
19	XCIN/P8_7	MIC_N_DET	I	O	Microphone detection
20	XCOUT/P8_6	PD_LED	O	O	Pure direct LED
21	RESET	MCPU_N_RST			---
22	XOUT	XOUT			---
23	VSS	VSS			---
24	XIN	XIN			---
25	VCC	VCC			---
26	NMI/P8_5	NMI			---
27	N_INT2/P8_4	WAKEUP_INT	I	O	Power switch, MISO interrupt of RS-232C (Sleep return)
28	N_INT1/P8_3	REM_IN2	I	O	Remote control pulse input 2
29	N_INT0/P8_2	REM_IN1	I	O	Remote control pulse input 1
30	UD0B/UD1B/IIO1_5/N_RTS5/N_CTS5/N_SS5/U/TA4IN/P8_1	TUN_N_INT	I	O	Interrupt from TUNER
31	UD0A/UD1A/RXD5/SCL5/STXD5/U/TA4OUT/P8_0	FHDMI_SCL	O	O	HDMI switcher 100k I2C clock
32	P18_1	FLD_PON	O	O	FL driver +3.3V power supply control
33	P18_0	STBY_LED	O	O	Standby LED control
34	UD0B/UD1B/IIO1_4/CLK5/TA3IN/P7_7	HSW_N_INT	I	O	Sii9589 1, 2 interrupt
35	UD0A/UD1A/IIO1_3/N_RTS8/N_CTS8/TXD5/SDA5/SRXD5/TA3OUT/P7_6	FHDMI_SDA	I/O	O	HDMI switcher 100k I2C data
36	IIO1_2/RXD8/W/TA2IN/P7_5	DAU_N_INT	I	O	Interrupt from DIR1, DIR2 and DSP
37	IIO1_1/CLK8/W/TA2OUT/P7_4	–	O	O	No used
38	P17_7	ISEL_RA	I	I	Input selector A
39	P17_6	ISEL_RB	I	I	Input selector B
40	P17_5	VOL_RA	I	I	Volume A
41	P17_4	VOL_RB	I	I	Volume B
42	IIO1_0/TXD8/N_SS2/N_RTS2/N_CTS2/V/TA1IN/P7_3	HRX_N_INT	I	O	HDMI RX (ADV7619) interrupt
43	CLK2/V/TA1OUT/P7_2	R32C_N_INT	O	O	Interrupt of R32C to Blackfin
		NCPU_SPI_REQ	I	O	BridgeCO request
44	MSCL/IEIN/ISRXD2/OUTC2_2/IIO1_7/STXD2/SCL2/RXD2/TA0IN/TB5IN/P7_1	DV_SCL	O	O	D-VIDEO 400k I2C clock
45	TA0OUT/TXD2/SDA2/SRXD2/IIO1_6/OUTC2_0/ISTXD2/IEOUT/MSDA/P7_0	DV_SDA	I/O	O	D-VIDEO 400k I2C data
46	TXD1/SDA1/SRXD1/P6_7	232C_DBG_MOSI	O	O	RS-232C transmission data / Debug / E8a
47	P14_7	DSP_PON	O	O	DSP power supply
48	RXD1/SCL1/STXD1/P6_6	232C_DBG_MISO	I	O	RS-232C reception data / Debug / E8a
49	P11_7	DAC_N_CS	O	O	DAC chip select (SW of V3071, FP DAC is D-FF)
50	CLK1/P6_5	DBG_SCK	I	O	E8a

Pin No.	Port Name	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
51	N_CTS1/N_RTS1/N_SS1/OUTC2_1/ISCLK2/ P6_4	DBG_BUSY	O	O	E8a
52	TXD0/SDA0/SRXD0/P6_3	DSP_MOSI	O	O	DSP/DIR/DAC transmission data
53	TB2IN/RXD0/SCL0/STXD0/P6_2	DSP_MISO	I	I	DSP/DIR/DAC reception data
54	TB1IN/CLK0/P6_1	DSP_SCK	O	O	DSP/DIR/DAC communication clock
55	TB0IN/N_CTS0/N_RTS0/N_SS0/P6_0	NCPU_N_INT	I	O	Network microprocessor interrupt
		NCPU_SPI_RDY	I	O	BridgeCO data ready
56	P19_5	–	I	I	No used (+3.3DSP is applied, input port setting)
57	D31/OUTC2_7/P13_7	DSP1_N_RST	O	O	DSP1 reset
58	D30/OUTC2_1/ISCLK2/P13_6	Space			
59	D29/OUTC2_2/ISRXD2/IEIN/P13_5	Space			
60	D28/OUTC2_0/ISTXD2/IEOUT/P13_4	Space			
61	P19_4	EEP_N_CS	O	O	EEPROM chip select
62	RDY/CS3/N_CTS7/N_RTS7/P5_7	FPGA_N_CS	B	O	External bus FPGA chip select
63	ALE/CS2/RXD7/P5_6	DFF2_N_CS	B	O	External bus DFF2 chip select
64	HOLD/CLK7/P5_5	DBG_EPM	I	I	E8a
65	HLDA/CS1/TXD7/P5_4	DFF1_N_CS	B	O	External bus DFF1 chip select
66	D27/OUTC2_3/P13_3	–	O	O	No used
67	VSS	VSS			---
68	D26/OUTC2_6/P13_2	DSP1_N_SPIRDY	I	O	DSP1 SPI ready
69	VCC	VCC			---
70	D25/OUTC2_5/P13_1	–	O	O	No used
71	D24/OUTC2_4/P13_0	DSP1_N_CS	O	O	DSP1 chip select
72	CLKOUT/BCLK/P5_3	NC(BCLK)	B	O	External bus
73	RD/P5_2	MCBUS_N_RD	B	O	External bus
74	WR1/BC1/P5_1	NC(BC1)	B	O	External bus
75	WR0/WR/P5_0	MCBUS_N_WR	B	I	External bus
		DBG_N_CE	I	I	E8a
76	D23/P12_7	MT_DA	O	O	Mute Digital Audio
77	D22/P12_6	DIR1_N_CS	O	O	DIR1 chip select
78	D21/P12_5	DIR_N_RST	O	O	DIR reset
79	P19_3	–	O	O	No used
80	P17_3	HPA_PU	O	O	HDMI RX HPA_B terminal pull-up presence control
		–	O	O	No used
81	P17_2	HSW_N_CS	O	O	HDMI SW chip select / L=SW1, H=SW2
82	P17_1	NCPU_PON	O	O	NET / USB power supply
83	P17_0	NCPU_VBUSDRV	I	O	USB VBUS drive
84	P19_2	USB_VBUS_PON	O	O	USB VBUS power supply control
85	CS0/A23/TXD6/SDA6/SRXD6/P4_7	FLASH_N_CS	O	O	External bus Flash ROM chip select
86	CS1/A22/RXD6/SCL6/STXD6/P4_6	A[22]	B	O	External bus
87	CS2/A21/CLK6/P4_5	A[21]	B	O	External bus
88	CS3/A20/N_CTS6/N_RTS6/N_SS6/P4_4	A[20]	B	O	External bus
89	A19/TXD3/SDA3/SRXD3/OUTC2_0/ISTXD2/ IEOUT/P4_3	A[19]	B	O	External bus
90	P11_6	–	O	O	No used
91	A18/RXD3/SCL3/STXD3/ISRXD2/IEIN/P4_2	A[18]	B	O	External bus
92	P11_5	DFF_FROM_N_RST	O	O	Reset of DFF
93	A17/CLK3/P4_1	A[17]	B	O	External bus
94	A16/N_CTS3/N_RTS3/N_SS3/P4_0	A[16]	B	O	External bus
95	P16_7/TXD10	EX_MOSI	O	O	FL / EEPROM / Expansion IO transmission data
96	P16_6/RXD10	EEP_MISO	I	O	EEPROM reception data
97	P16_5/CLK10	EX_SCK	O	O	FL / EEPROM / Expansion IO communication clock
98	P16_4/N_CTS10/N_RTS10	BF_MT	I	O	Mute signal from Blackfin (for NCPU_N_INT distinction)
		NCPU_AMUTE	I	O	Mute signal from BridgeCO
99	A15/[A15/D15]/TA4IN/U/P3_7	A[15]	B	O	External bus
100	A14/[A14/D14]/TA4OUT/U/P3_6	A[14]	B	O	External bus
101	A13/[A13/D13]/TA2IN/W/P3_5	A[13]	B	O	External bus
102	A12/[A12/D12]/TA2OUT/W/P3_4	A[12]	B	O	External bus

Pin No.	Port Name	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
103	P16_3/TXD9	NCPU_PIC_MISO	O	O	Network microprocessor SPI transmission data
		NCPU_SPI_MOSI	O	O	Data (Master out slave in)
104	P16_2/RXD9	NCPU_PIC_MOSI	I	O	Network microprocessor SPI reception data
		NCPU_SPI_MISO	I	O	Data (Master in slave out)
105	P16_1/CLK9	NCPU_PIC_SCK	I	O	Network microprocessor SPI communication clock
		NCPU_SPI_SCK	O	O	Clock (Master out slave in)
106	P16_0/N_CTS9/N_RTS9	NCPU_N_RST	O	O	Network microprocessor reset
107	A11/[A11/D11]/TA1IN/V/P3_3	A[11]	B	O	External bus
108	A10/[A10/D10]/TA1OUT/V/P3_2	A[10]	B	O	External bus
109	A9/[A9/D9]/TA3OUT/UD0B/UD1B/P3_1	A[9]	B	O	External bus
110	D20/P12_4	AD_SEL_A	O	O	AD select A
111	D19/N_CTS6/N_RTS6/N_SS6/P12_3	AD_SEL_B	O	O	AD select B
112	D18/RXD6/SCL6/STXD6/P12_2	AD_SEL_C	O	O	AD select C
113	D17/CLK6/P12_1	FPGA_SCK	O	O	FPGA clock (at Boot)
114	D16/TXD6/SDA6/SRXD6/P12_0	FPGA_MOSI	O	O	FPGA transmission data (at Boot)
115	VCC	VCC			---
116	A8/[A8/D8]/TA0OUT/UD0A/UD1A/P3_0	A[8]	B	O	External bus
117	VSS	VSS			---
118	A7/[A7/D7]/AN2_7/P2_7/TXD10	A[7]	B	O	External bus
119	A6/[A6/D6]/AN2_6/P2_6/RXD10	A[6]	B	O	External bus
120	A5/[A5/D5]/AN2_5/P2_5/CLK10	A[5]	B	O	External bus
121	A4/[A4/D4]/AN2_4/P2_4/N_CTS10/N_RTS10	A[4]	B	O	External bus
122	A3/[A3/D3]/AN2_3/P2_3/TXD9	A[3]	B	O	External bus
123	A2/[A2/D2]/AN2_2/P2_2/RXD9	A[2]	B	O	External bus
124	A1/[A1/D1]/BC2/[BC2/D1]/AN2_1/P2_1/CLK9	A[1]	B	O	External bus
125	A0/[A0/D0]/BC0/[BC0/D0]/AN2_0/P2_0/N_CTS9/N_RTS9	A[0]	B	O	External bus
126	D15/N_INT5/IIO0_7/IIO1_7/P1_7	D[15]	B	I	External bus
127	D14/N_INT4/IIO0_6/IIO1_6/P1_6	D[14]	B	I	External bus
128	D13/N_INT3/IIO0_5/IIO1_5/P1_5	D[13]	B	I	External bus
129	D12/IIO0_4/IIO1_4/P1_4	D[12]	B	I	External bus
130	D11/IIO0_3/IIO1_3/P1_3	D[11]	B	I	External bus
131	D10/IIO0_2/IIO1_2/P1_2	D[10]	B	I	External bus
132	D9/IIO0_1/IIO1_1/P1_1	D[9]	B	I	External bus
133	IIO0_0/IIO1_0/D8/P1_0	D[8]	B	I	External bus
134	AN0_7/D7/P0_7	D[7]	B	I	External bus
135	AN0_6/D6/P0_6	D[6]	B	I	External bus
136	AN0_5/D5/P0_5	D[5]	B	I	External bus
137	AN0_4/D4/P0_4	D[4]	B	I	External bus
138	P19_1	FPGA_N_CFG	O	O	FPGA nCONF
139	WR3/BC3/P11_4	FPGA_N_STA	I	I	FPGA nSTATUS
140	P19_0	FPGA_CDONE	I	I	FPGA CONF DONE
141	IIO1_3/N_RTS8/N_CTS8/WR2/CS3/P11_3	DIAG_CHECK	O	O	Diag inspection result output / OK=High, NG=Low
142	IIO1_2/RXD8/CS2/P11_2	NCPU_MISO	I	O	Network microprocessor UART reception data
		NDAC_N_MT	O	O	Net zone DAC mute
143	IIO1_1/CLK8/CS1/P11_1	SPRY_Z2&FP	O	O	SP relay Zone2 and Front Presence
144	IIO1_0/TXD8/CS0/P11_0	NCPU_MOSI	O	O	Network microprocessor UART transmission data
		NCPU_SPI_N_CS	O	O	Network microprocessor SPI chip select
145	P18_7	HPRY	O	O	HP relay
146	P18_6	MT_N_Z2	O	O	Mute Zone2 (Line out)
147	P18_5	SPRY_SB&BA	O	O	SP relay surround back and Bi-Amp
148	P18_4	MT_N_5CH	O	O	Mute 5ch (L, C, R, SRL, SRR Preout/Main amplifier input)
149	P18_3	MT_N_SW	O	O	Mute Subwoofer (Preout)
150	P18_2	MT_N_SB	O	O	Mute SB/BA/Z2/FP (Preout/Main amplifier input)
151	AN0_3/D3/P0_3	D[3]	B	I	External bus
152	AN0_2/D2/P0_2	D[2]	B	I	External bus
153	AN0_1/D1/P0_1	D[1]	B	I	External bus
154	AN0_0/D0/P0_0	D[0]	B	I	External bus

Pin No.	Port Name	Function Name	I/O Related Power Supply ON	I/O Related Power Supply OFF	Detail of Function
155	IIO0_7/N_RTS6/N_CTS6/N_SS6/AN15_7/P15_7	SVID_DET	I	I	S-video detect
156	IIO0_6/CLK6/AN15_6/P15_6	HP_N_DET	I	O	Headphone detection
157	IIO0_5/RXD6/SCL6/STXD6/AN15_5/P15_5	EX1_N_CS	O	O	Expansion IO 1 chip select
158	IIO0_4/TXD6/SDA6/SRXD6/AN15_4/P15_4	EX1_N_RST	O	O	Expansion IO 1 reset
159	IIO0_3/N_RTS7/N_CTS7/AN15_3/P15_3	DSP1_N_INT	I	O	Interrupt from DSP1 (for DAU_N_INT distinction)
160	IIO0_2/RXD7/AN15_2/P15_2	DIR1_N_INT	I	O	Interrupt from DIR1 (for DAU_N_INT distinction)
161	IIO0_1/CLK7/AN15_1/P15_1	IR_OUT	O	O	Remote control cord output
162	VSS	VSS			---
163	IIO0_0/TXD7/AN15_0/P15_0	HRX1_N_MT	I	O	
164	VCC	VCC			---
165	KI3/AN_7/P10_7	+3.3S_PON	O	O	+3.3S power supply
166	KI2/AN_6/P10_6	AD2_COM	I	O	AD selector 2 COM input
167	KI1/AN_5/P10_5	AD1_COM	I	O	AD selector 1 COM input
168	KI0/AN_4/P10_4	HSW_2CHIP	I	I	HDMI SW number distinction
169	AN_3/P10_3	–	O	O	No used
170	AN_2/P10_2	KY_AD2	I	O	Key 2
171	AN_1/P10_1	KY_AD1	I	O	Key 1
172	AVSS	AVSS			---
173	AN_0/P10_0	TUN_N_RST	O	O	Tuner reset
174	VREF	VREF			---
175	AVCC	AVCC			---
176	STXD4/SCL4/RXD4/ADTRG/P9_7	TUN_SCL	O	O	Tuner I2C clock

Key detection for A/D port
Key input (A/D) pull-up resistance 10 k-ohms

	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.5 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	22 kΩ	33 kΩ
Detected voltage value at 171 pin	0 – 0.15 V	0.15 – 0.42 V	0.43 – 0.70 V	0.71 – 0.97 V	0.98 – 1.24 V	1.25 – 1.53 V	1.54 – 1.84 V	1.85 – 2.22 V	2.23 – 2.62 V	2.63 – 3.04 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 75	76 – 96	97 – 119	120 – 142	143 – 163	182 – 197	198 – 209
KEY1	RADIO (SCENE4)	NET (SCENE3)	TV (SCENE2)	BD/DVD (SCENE1)	ZONE CONTROL	ZONE2	INPUT > (RX-V673/HTR-6065 models)	INPUT < (RX-V673/HTR-6065 models)	MAIN ZONE ⏻ (power)	TONE CONTROL

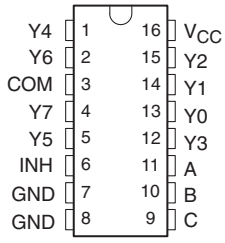
	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.8 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	+ 6.8 kΩ	+ 10 kΩ	+ 22 kΩ	+ 68 kΩ
Detected voltage value at 170 pin	0 – 0.15 V	0.16 – 0.42 V	0.43 – 0.70 V	0.71 – 0.99 V	1.00 – 1.27 V	1.28 – 1.56 V	1.57 – 1.86 V	1.87 – 2.14 V	2.15 – 2.39 V	2.40 – 2.65 V	2.66 – 2.91 V	2.92 – 3.17 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 77	78 – 99	100 – 121	122 – 144	145 – 166	167 – 186	187 – 205	206 – 226	227 – 246
KEY2	PURE DIRECT	TUNING >>	TUNING <<	AM	FM	PRESET >	PRESET <	MEMORY	INFO	STRAIGHT	PROGRAM >	PROGRAM <

Destination detection for A/D port
Pull-up resistance 10 k-ohms

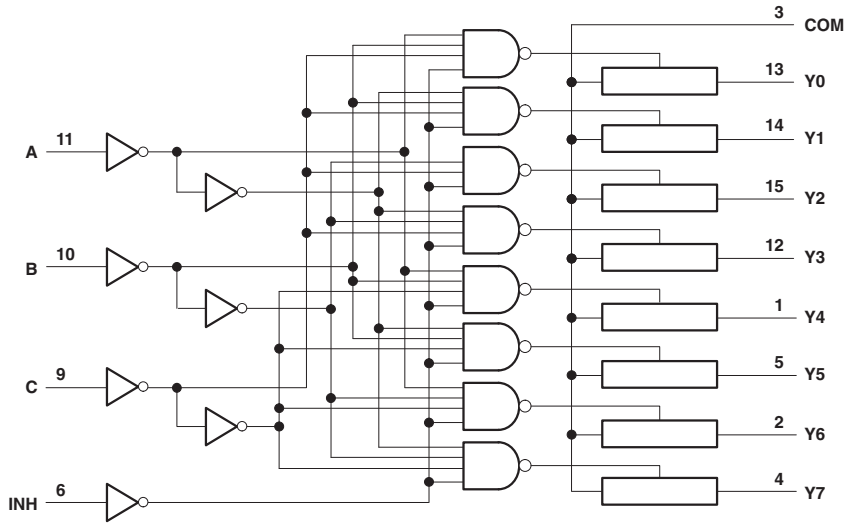
R753 on DIGITAL P.C.B.	0 Ω	1.2 kΩ	2.7 kΩ	4.7 kΩ	6.8 kΩ	10 kΩ	15 kΩ	47 kΩ	100 kΩ
Detected voltage value at 111 pin	0 – 0.16 V	0.17 – 0.51 V	0.52 – 0.87 V	0.88 – 1.92 V	1.93 – 1.49 V	1.50 – 1.81 V	1.82 – 2.35 V	2.36 – 2.86 V	2.87 – 3.15 V
A/D value (3.3 V=255)	0 – 12	13 – 39	40 – 67	68 – 92	93 – 115	116 – 140	141 – 169	199 – 221	222 – 244
Destination	J	U	C	R, S	T	K	A	B, G, F	L, H

- **Microprocessor extended port**

IC76, 78: SN74LV4051APWR (DIGITAL P.C.B.)
8-channel analog multiplexers/demultiplexers



INPUTS				ON CHANNEL
INH	C	B	A	
L	L	L	L	Y0
L	L	L	H	Y1
L	L	H	L	Y2
L	L	H	H	Y3
L	H	L	L	Y4
L	H	L	H	Y5
L	H	H	L	Y6
L	H	H	H	Y7
H	X	X	X	None



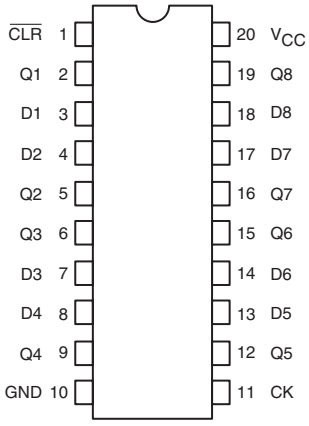
IC76

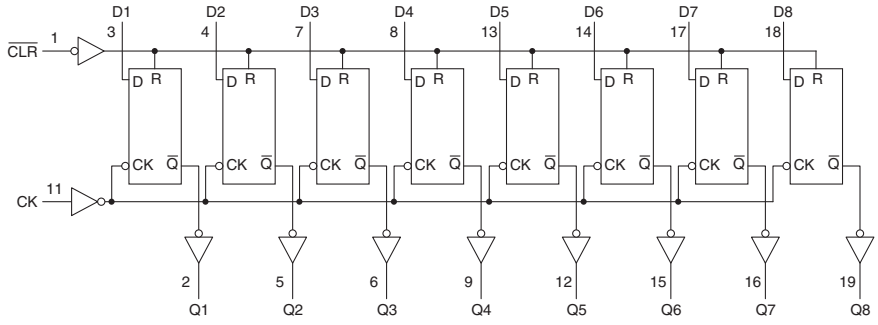
Pin No.	Port Name	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
1	Y4	THM2	I	I	Temperature detection 2
2	Y6	THM3	I	I	Temperature detection 3
4	Y7	THM4	I	I	Temperature detection 4
5	Y5	DEST	I	I	Destination distinction
12	Y3	MODEL	I	I	Model distinction
13	Y0	Space	I	I	–
14	Y1	USB_VBUS_PRT	I	I	Front USB overcurrent detection
15	Y2	Space	I	I	–

IC78

Pin No.	Port Name	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
AD selector 1 (AD1_COM signal is input into AN_5 of R32C)					
1	Y4	PS2_PRT	I	I	Power supply protection 2
2	Y6	PS1_PRT	I	I	Power supply protection 1
4	Y7	AMP_OLV	I	I	Amplifier output level detection
5	Y5	DC_PRT	I	I	DC protection
12	Y3	THM1	I	I	Temperature detection 1
13	Y0	PS3_PRT	I	I	Power supply protection 3
14	Y1	L3_DET	I	I	D terminal L3 detection
15	Y2	MODE	I	I	Special mode distinction

IC79, 81: TC74VHC273FT (EL,K) (DIGITAL P.C.B.)
Octal D-type flip-flop with clear





Inputs			Output	Function
$\overline{CLR}$	D	CK	Q	
L	X	X	L	Clear
H	L	↑	L	–
H	H	↑	H	–
H	X	↓	Q_n	No Change

IC79

Pin No.	R32C external bus data	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
2	D[8]	HDMI_PON	O	O	HDMI power supply (Necessary for DSP, A-VIDEO drive)
5	D[9]	HRX1_N_RST	O	O	HDMI receiver reset
6	D[10]	HTX1_N_RST	O	O	HDMI transmitter reset
9	D[11]	HTX2_N_RST	O	O	HDMI transmitter 2 reset
12	D[12]	CEC_EN	O	O	CEC function ON/OFF of HDMI TX1
15	D[13]	HTX_AUSEL	O	O	HDMI transmitter sound select
16	D[14]	HAU_N_OE	O	O	HDMI to DIR sound output enable
19	D[15]	ZTX_AUSEL2	O	O	Switching of the HDMI sound and except HDMI

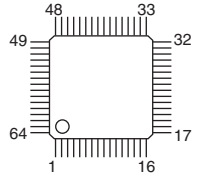
IC81 (D-FF11)

Pin No.	R32C external bus data	Function Name	I/O Related Power Supply		Detail of Function
			ON	OFF	
2	D[0]	HSW_N_RST	O	O	HDMI switcher reset
5	D[1]	VDEC_N_RST	O	O	Video decoder reset
6	D[2]	WIFI_PON	O	O	WiFi adaptor power supply control (spare)
9	D[3]	HRX_VSEL	O	O	Video decoder to scaler line enable
12	D[4]	F_HEQ_CE	O	O	Front HDMI + 3.3HF power supply: Interlocking movement with HDMI_PON
15	D[5]	VID_PON	O	O	Video power supply
16	D[6]	+3.3D_PON	O	O	OR of HDMI_PON, DSP_PON, NET_USB_PON
19	D[7]	PRY	O	O	Power relay

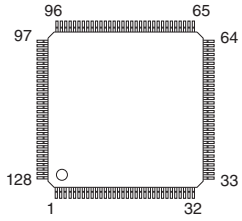
■ PIN CONNECTION DIAGRAMS

• ICs

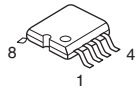
ADV7180BSTZ



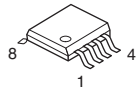
ADV7619KSVZ



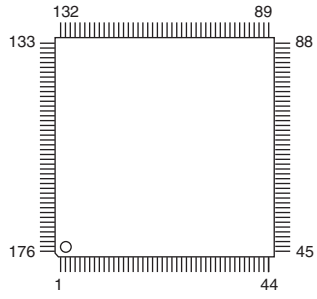
BD7542F-E2



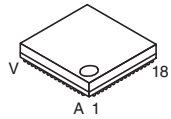
BD9328EFJ
BD9329AEFJ-E2

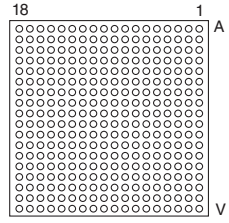


D80YK113CPTP400

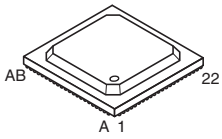


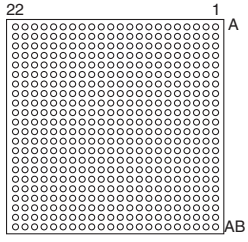
DM860A-AQE



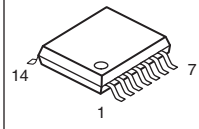


EP4CE15F23C6N

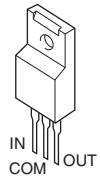




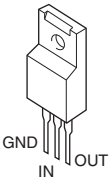
FHP3350IM14X



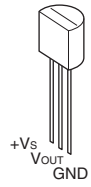
KIA7805API



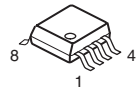
KIA7912PI



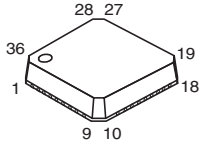
LM19CIZ/LF

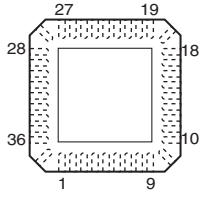


LM833MX

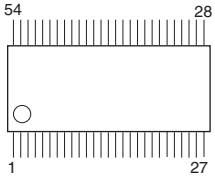


LAN8700C-AEZG-TR

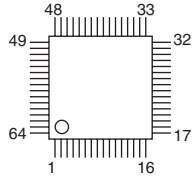




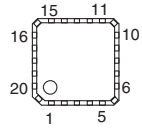
M12L2561616A-5TG2A
M12L64164A-5TG



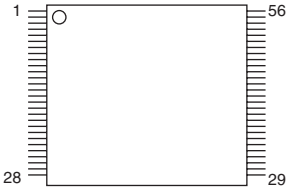
M66003-0131FP-R



MFI341S2162

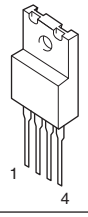


MX29GL256FLT2I-90Q



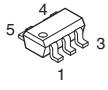
MX29LV640EBTI-70G

NJM2388F05

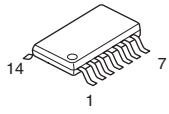


1. VIN
2. VOUT
3. GND
4. ON/OFF CONTROL

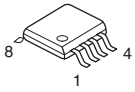
NJM2505A



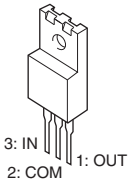
NJM2581M



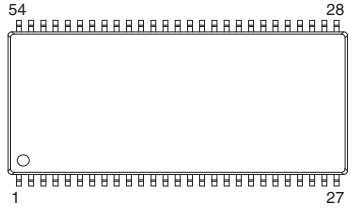
NJM4565M (TE1)



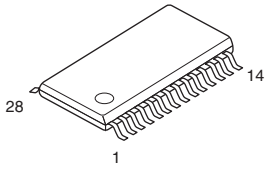
NJM7812FA



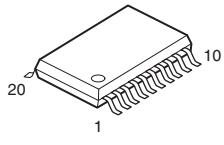
NT5SV8M16HS-6K



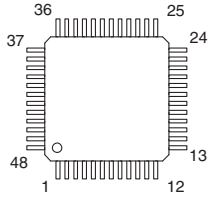
PCM1681PWPR



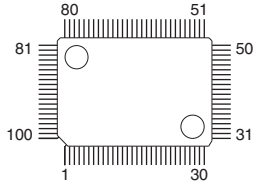
PCM5101PWR



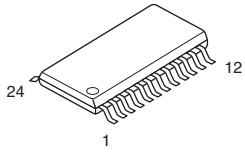
PCM9211PTR



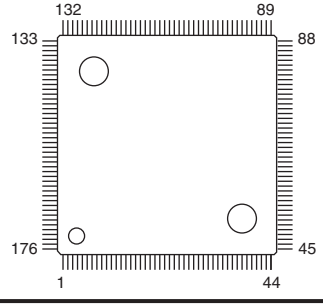
R2A15220FP



R5F213G1DN400SP#W4



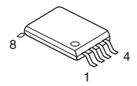
R5F6416MADFE



• ICs

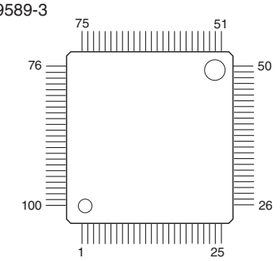
R1163N501B-TR-FE
R1172N301D-TR-F

R1EX25512ATA00A

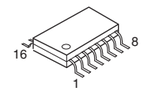


RP130Q121D-TR-F
RP130Q181D-TR-F
RP130Q251D-TR-FE
RP130Q331D-TR-F
RP130Q501D-TR-F

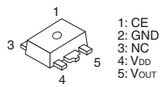
SiI9136CTU-3
SiI9589-3



SN74LV4051APWR



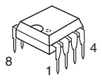
R1172H121D-T1-F
R1172H501D-T1-F
RP132H331D-T1-FE



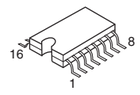
1: CE
2: GND
3: NC
4: V_{DD}
5: V_{OUT}

SN74LVC1G17DCKR

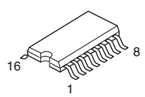
STR2A153



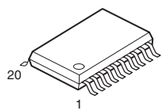
TC74HC4051AFEL



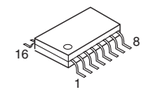
TC74HC4053AF



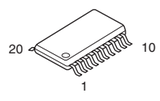
TC74LCX245FT



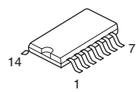
TC74VHC157FT



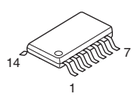
TC74VHC273FT (EL,K)



TC74VHCT08AF

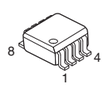


TC74VHCU04FT

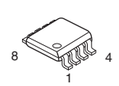


TC7SH08FU
TC7SH32FU
TC7SH86FU
TC7SH125FU

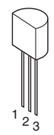
TC7WH126FU



TC7WZ32FK (TE85L, F)

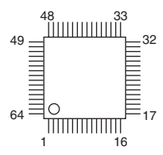


TL431ACLPR

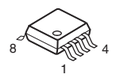


1: CATHODE
2: ANODE
3: REF

TMDS261BPAGR

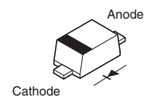


W25Q80BVSSIG

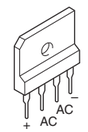


• Diodes

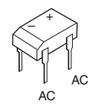
1SS355
1SS355VMTE-17



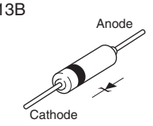
D6SBN20



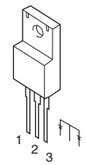
DBL155G



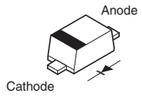
MTZJ5.1C
MTZJ6.8C
MTZJ13B



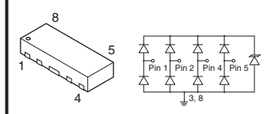
RB215T-90



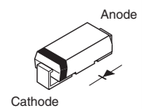
RB501V-40
RB521S-30



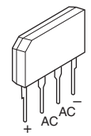
RCLAMP0584J



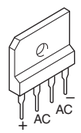
RF101L2STE25



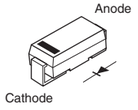
RS203M-B-C-J80



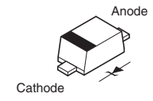
RS603M-B-C-J80



SARS05

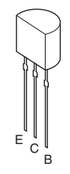


UDZS12B 12V
UDZV4.3B
UDZV5.1B
UDZV36B

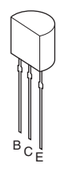


• Transistors

2N5401C-AT/P



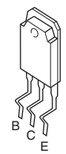
2N5551C-AT



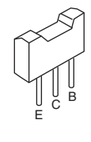
2SA1312-GR,BL

2SA1576A
2SA1576UBTLR

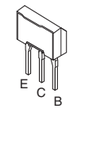
2SA1695 O,P,Y
2SC4468 O,P,Y



2SA1708



2SA1770S/T-AN



2SA949
2SC2229

2SC3324-GR,BL
2SC3906K

2SC4081 T106

2SC4081UBTLR

2SC4614S/T-AN

2SC5964-TD-E

2SD2704 K

2SD2705S TP

DTA044EUBTL
DTC014EUBTL

1: IN
2: GND
3: OUT

DTA114EKA
DTC114EKA
DTC144EKA

1: GND
2: IN
3: OUT

HN4B01JE

1. BASE 1 (B1)
2. EMITTER (E)
3. BASE 2 (B2)
4. COLLECTOR 2 (C2)
5. COLLECTOR 1 (G2)

KRA102M-AT/P
KRC102M-AT

KTA1046-Y-U/PFY
KTA1837-U/P

KTA1504S
KTC3875S

MCH6336-TL-E

1. Drain
2. Drain
3. Gate
4. Source
5. Drain
6. Drain

RAL035P01

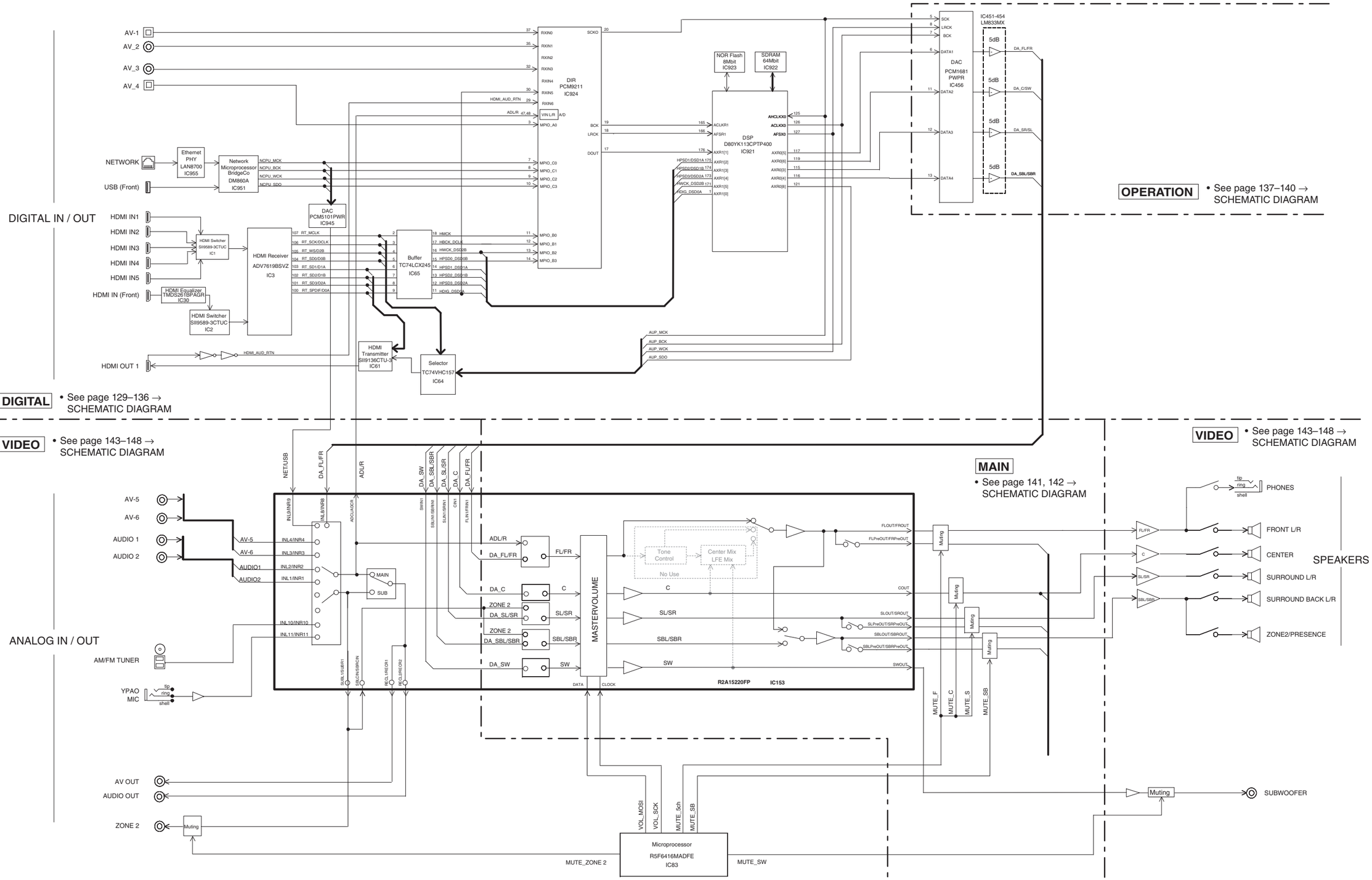
1. DRAIN
2. DRAIN
3. GATE
4. SOURCE
5. DRAIN
6. DRAIN

µPA672T-T1-A

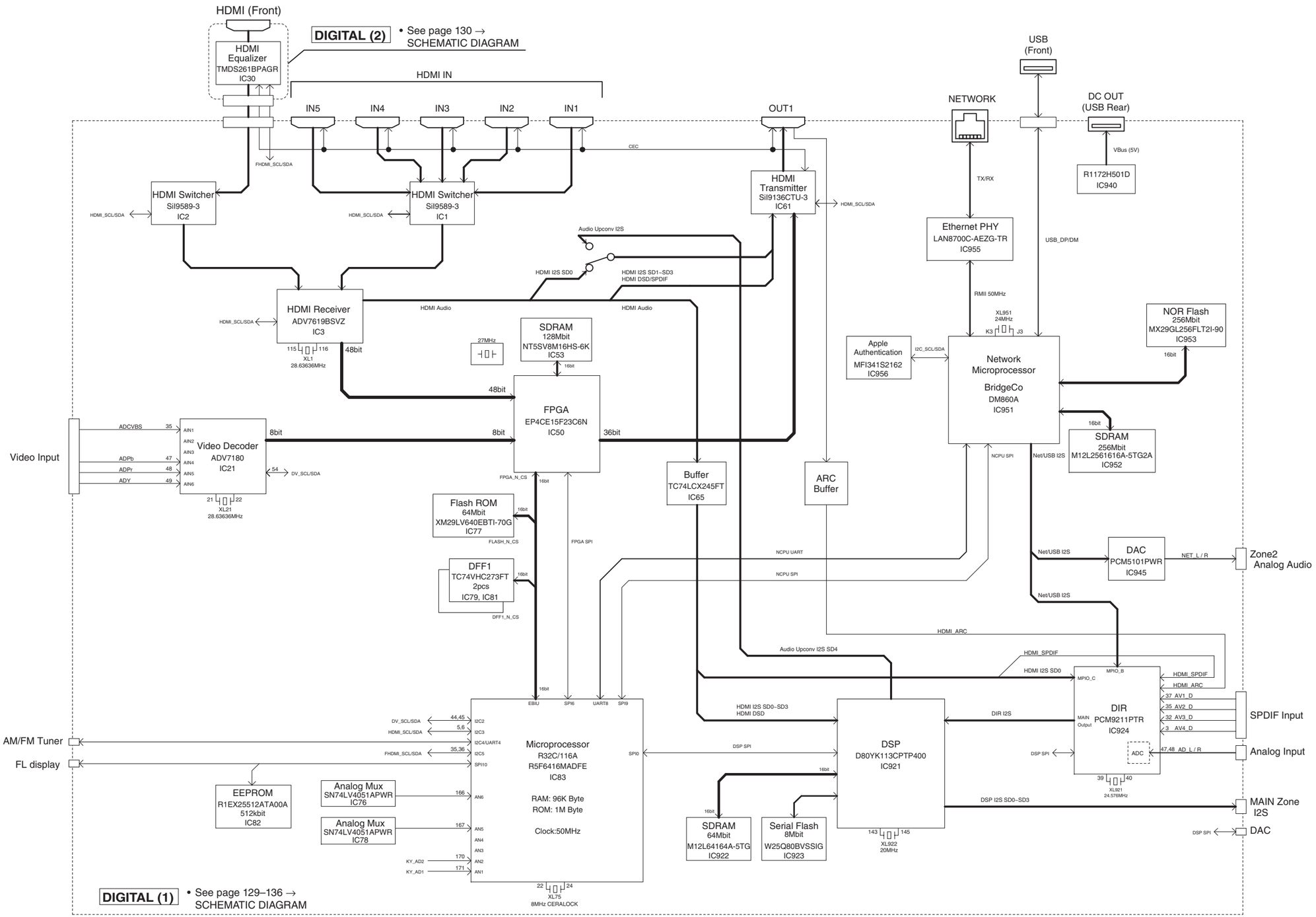
1. Source 1 (S1)
2. Gate 1 (G1)
3. Drain 2 (D2)
4. Source 2 (S2)
5. Gate 2 (G2)
6. Drain 1 (D1)

■ BLOCK DIAGRAMS

AUDIO Section Block Diagram



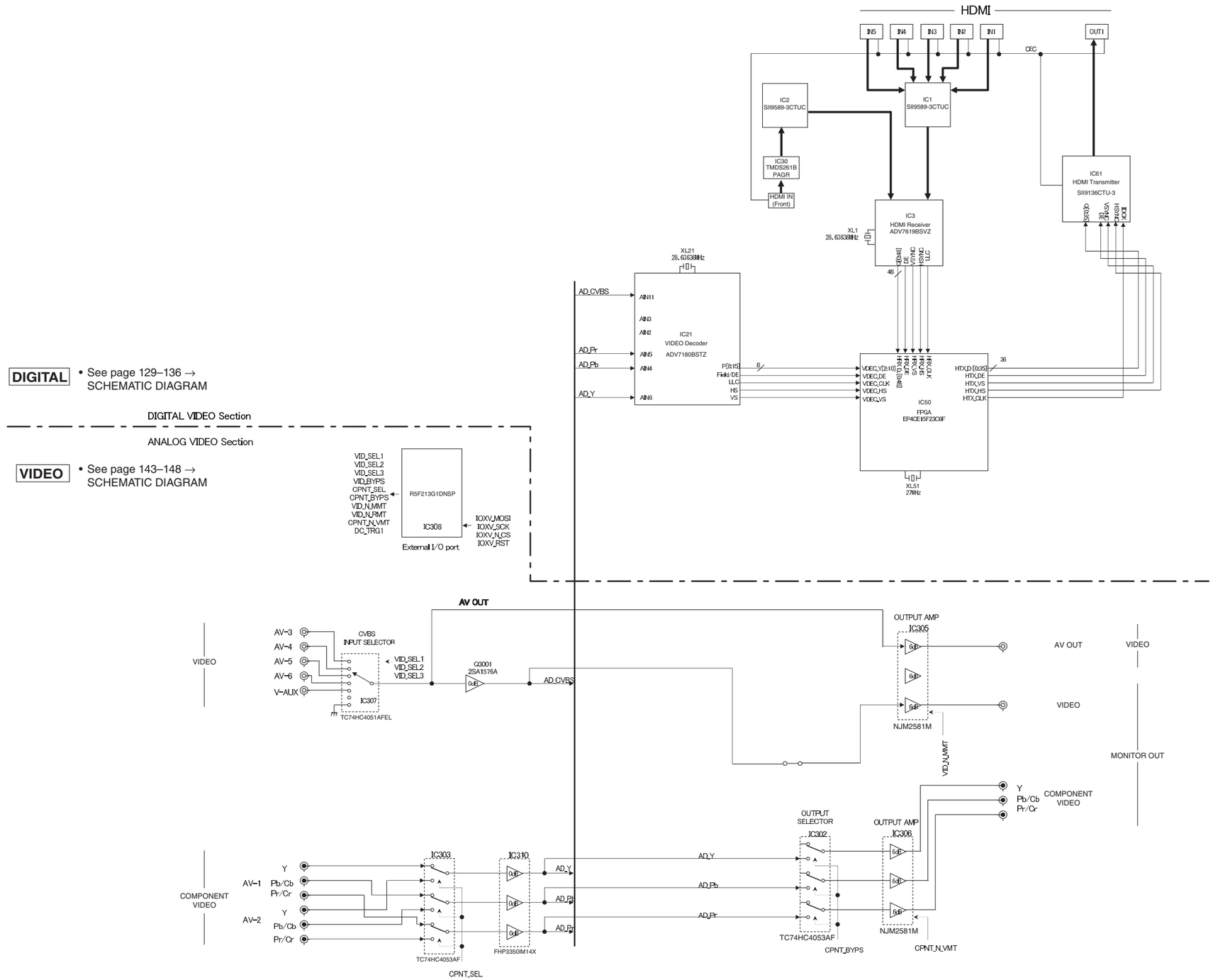
DIGITAL P.C.B. Section Block Diagram



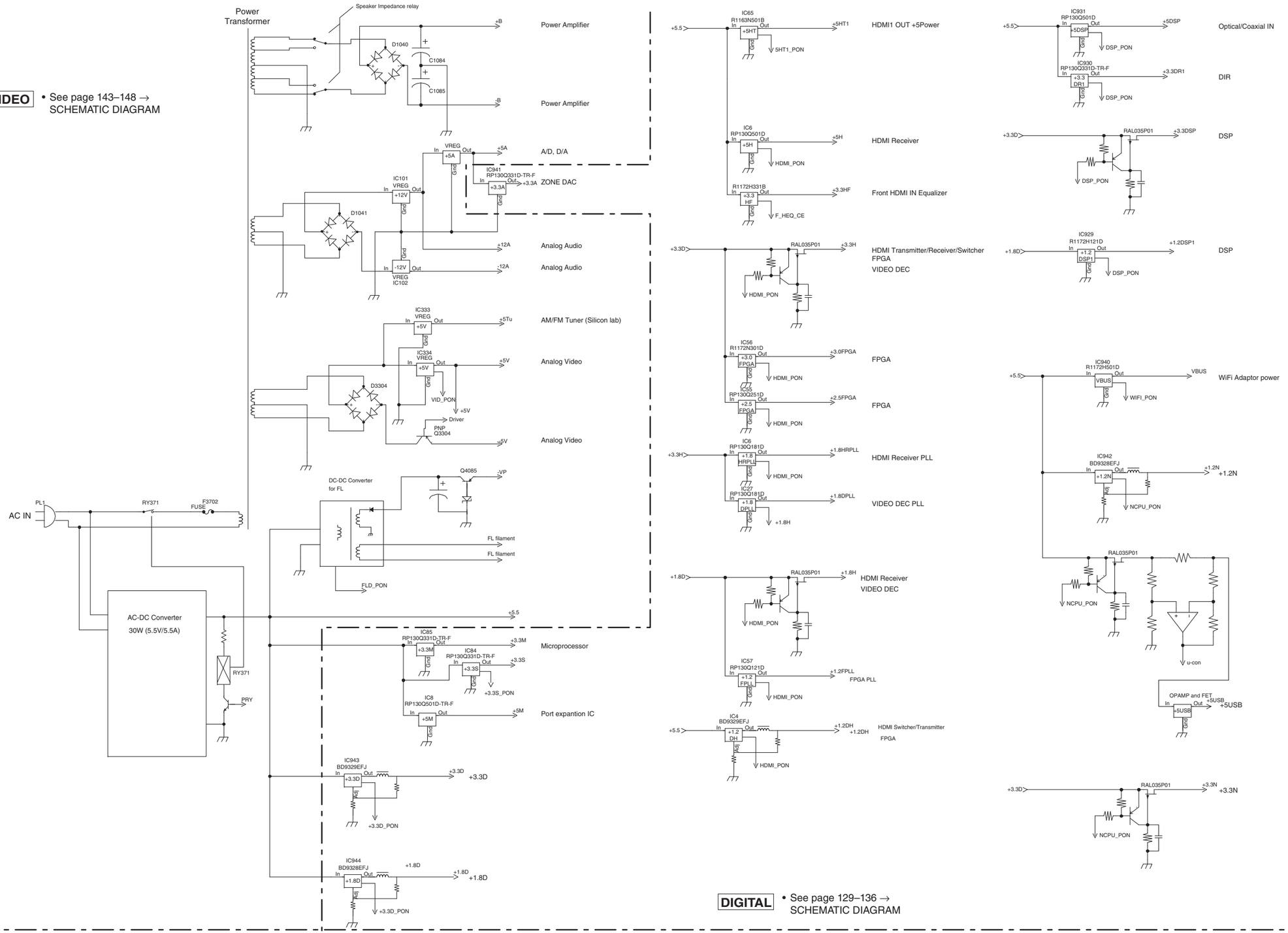
DIGITAL / VIDEO Section Block Diagram

DIGITAL • See page 129–136 →
SCHEMATIC DIAGRAM

VIDEO • See page 143–148 →
SCHEMATIC DIAGRAM



Power Supply Section Block Diagram



VIDEO • See page 143–148 → SCHEMATIC DIAGRAM

DIGITAL • See page 129–136 → SCHEMATIC DIAGRAM

■ PRINTED CIRCUIT BOARDS

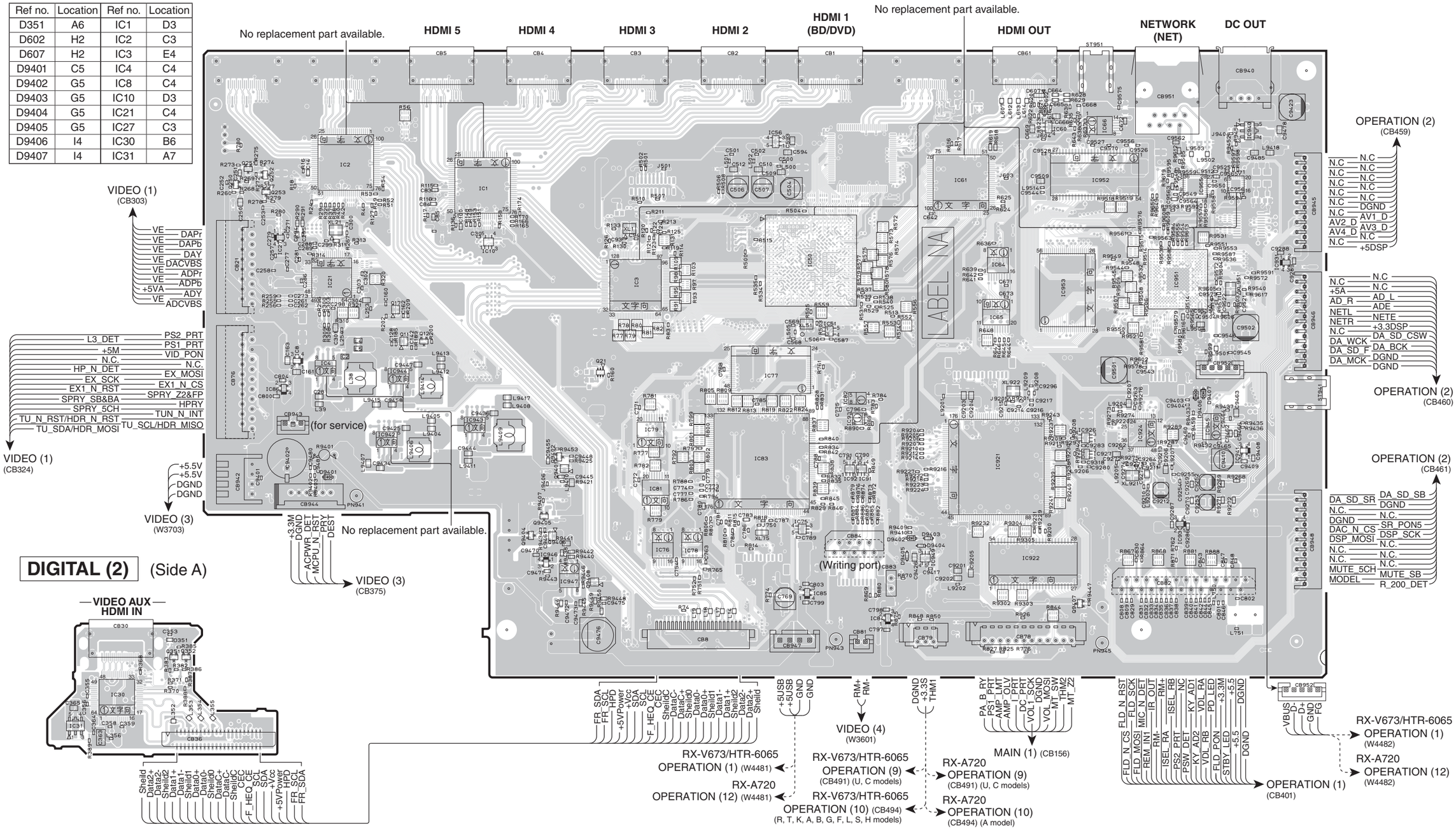
RX-V673/HTR-6065 | **RX-A720**

DIGITAL (1) (Side A)

Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
IC50	F3	IC65	G4	IC79	E5	IC86	C4	IC924	H5	IC941	I5	IC947	E6	IC956	I3	Q251	B3	Q9402	E5
IC51	F4	IC66	H3	IC81	E5	IC91	F5	IC926	H5	IC942	C5	IC949	G5	Q11	C4	Q252	C3	Q9404	D5
IC56	F3	IC75	F5	IC82	F4	IC92	F5	IC927	H5	IC943	D5	IC951	I4	Q12	D4	Q253	C3	Q9405	D5
IC60	H3	IC76	E5	IC83	F5	IC93	F5	IC930	I5	IC944	C4	IC952	H3	Q17	C4	Q351	B6	Q9406	D5
IC61	G3	IC77	F4	IC84	G6	IC921	G5	IC931	I4	IC945	I5	IC953	H4	Q21	E4	Q352	B6	Q9407	H6
IC64	G3	IC78	E5	IC85	F6	IC922	H5	IC940	I3	IC946	D5	IC955	I3	Q250	B3	Q9401	E5	Q9408	E6

• Semiconductor Location

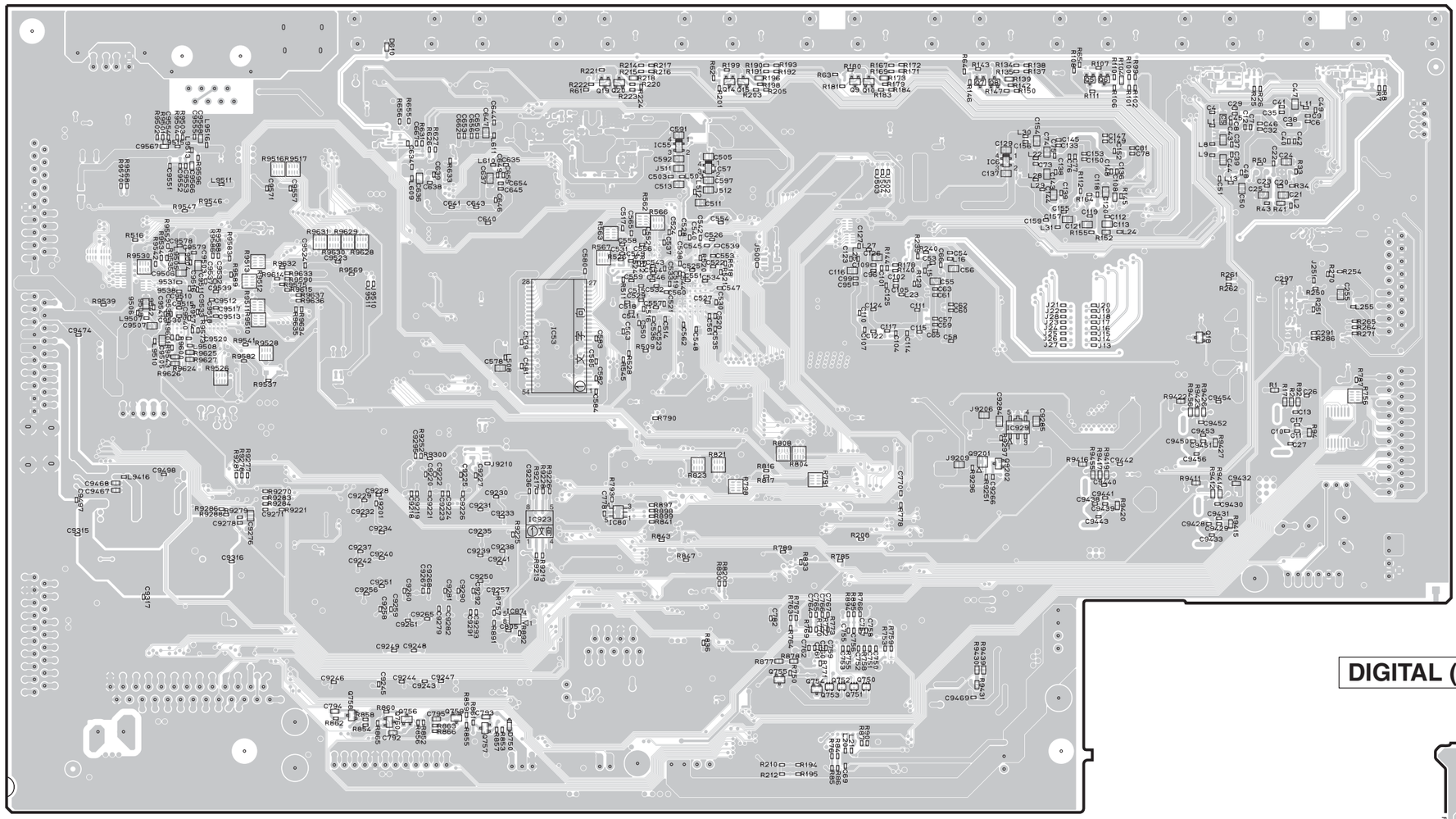
Ref no.	Location	Ref no.	Location
D351	A6	IC1	D3
D602	H2	IC2	C3
D607	H2	IC3	E4
D9401	C5	IC4	C4
D9402	G5	IC8	C4
D9403	G5	IC10	D3
D9404	G5	IC21	C4
D9405	G5	IC27	C3
D9406	I4	IC30	B6
D9407	I4	IC31	A7



DIGITAL (2) (Side A)

RX-V673/HTR-6065 | **RX-A720**

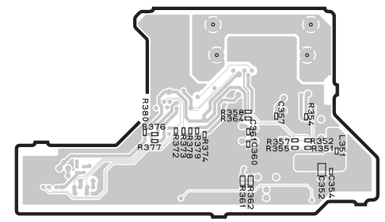
DIGITAL (1) (Side B)



• Semiconductor Location

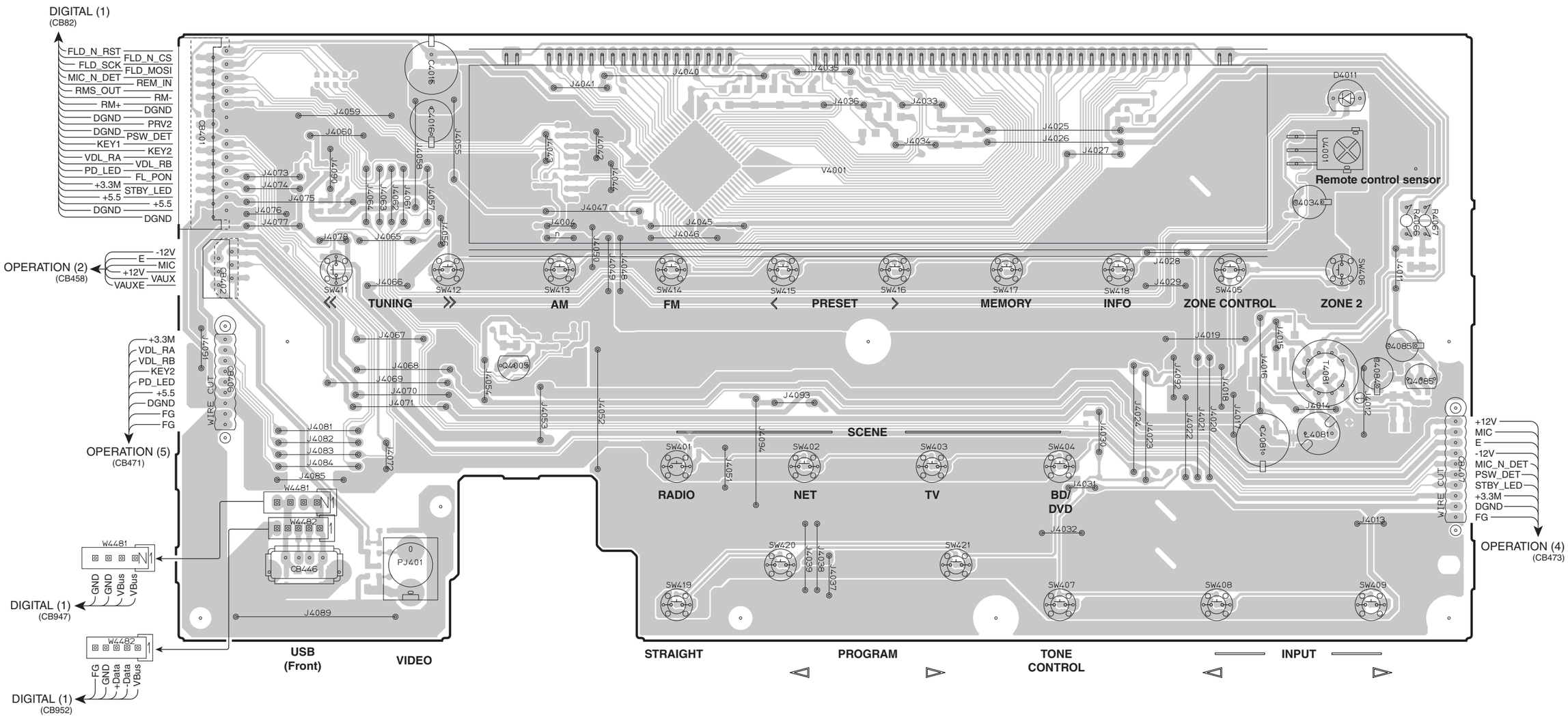
Ref no.	Location	Ref no.	Location
D610	D2	Q15	E3
D750	D6	Q18	H4
IC6	G3	Q19	E3
IC53	D4	Q20	E3
IC55	E3	Q750	F6
IC57	E3	Q751	F6
IC80	E5	Q752	F6
IC87	D5	Q753	F6
IC923	D5	Q754	F6
IC929	G4	Q755	F6
Q5	G3	Q756	D6
Q6	G3	Q757	D6
Q7	G3	Q758	C6
Q8	G3	Q759	D6
Q9	F3	Q760	D6
Q10	F3	Q9201	G4
Q14	E3	Q9202	G4

DIGITAL (2) (Side B)



RX-V673/HTR-6065

OPERATION (1) (Side A)

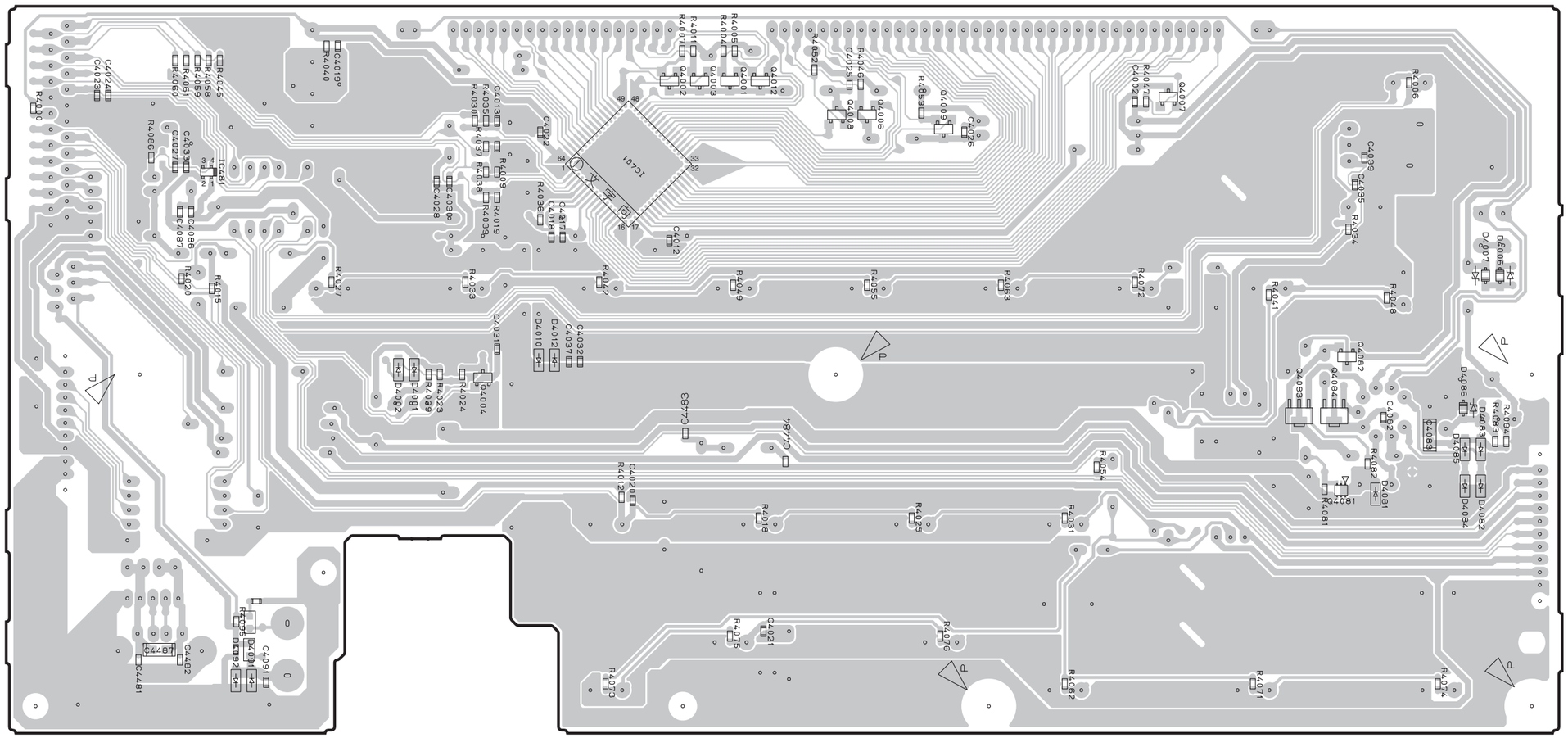


• Semiconductor Location

Ref no.	Location
D4011	I3
Q4005	D4
Q4085	J4

RX-V673/HTR-6065

OPERATION (1) (Side B)

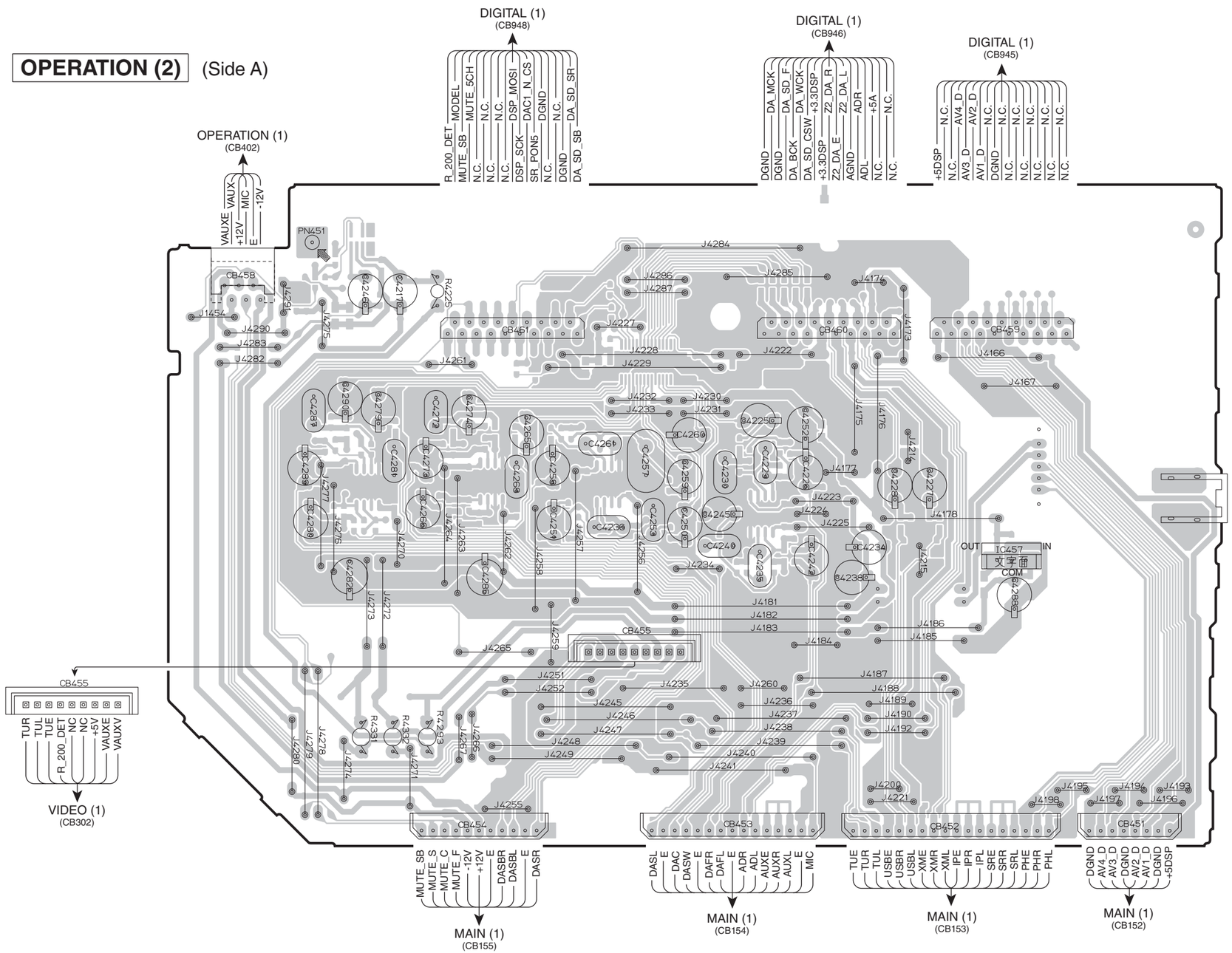


• Semiconductor Location

Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
D4001	C4	D4083	I4	Q4001	E3	Q4012	E3
D4002	C4	D4084	I5	Q4002	E3	Q4081	H5
D4006	I4	D4085	I4	Q4003	E3	Q4082	H4
D4007	I4	D4086	I4	Q4004	D4	Q4083	H4
D4010	D4	D4091	C6	Q4006	F3	Q4084	H4
D4012	D4	D4092	C6	Q4007	G3		
D4081	H5	IC401	E3	Q4008	F3		
D4082	I5	IC481	B3	Q4009	F3		

RX-V673/HTR-6065

OPERATION (2) (Side A)

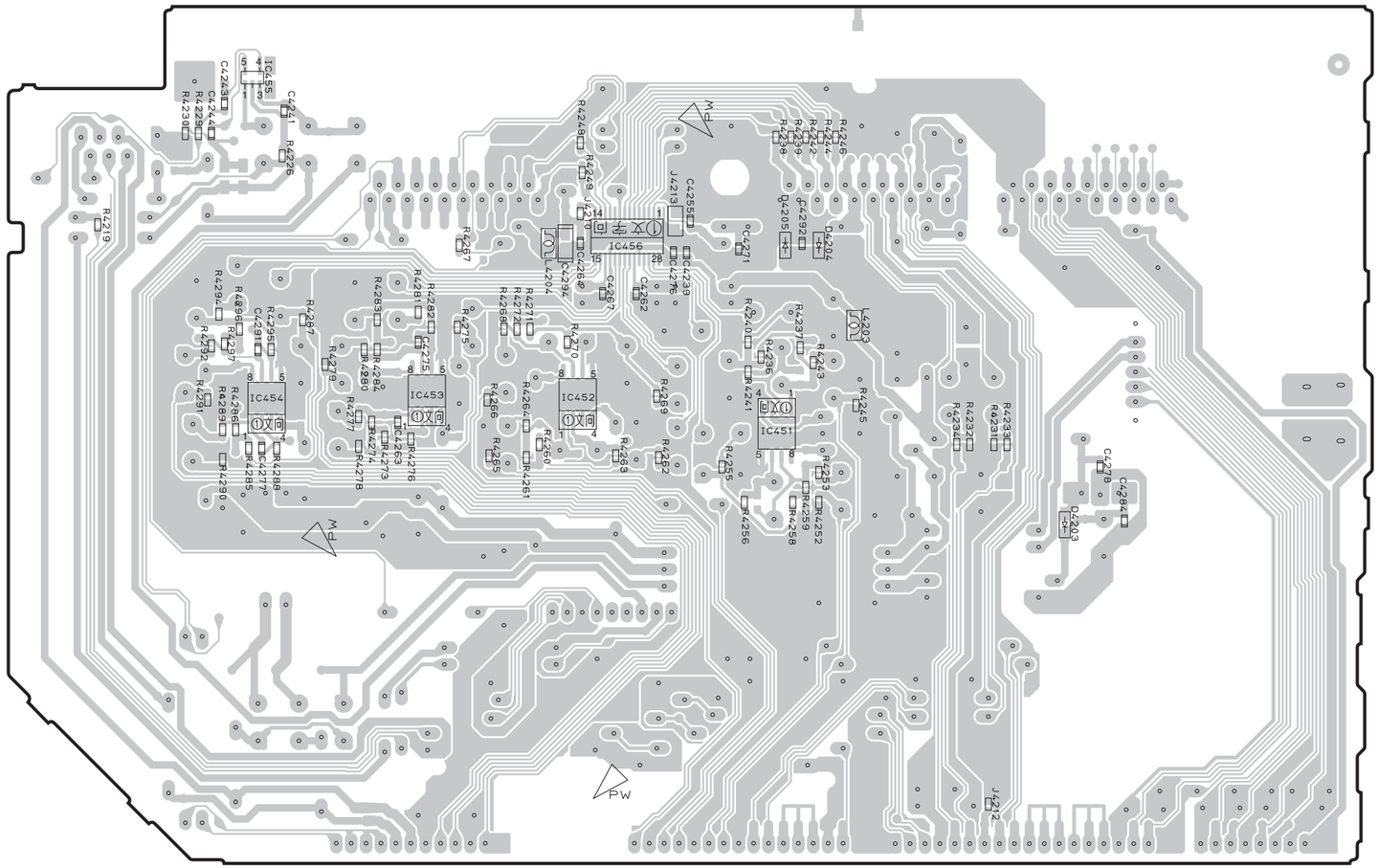


• Semiconductor Location

Ref no.	Location
IC457	G4

RX-V673/HTR-6065

OPERATION (2) (Side B)

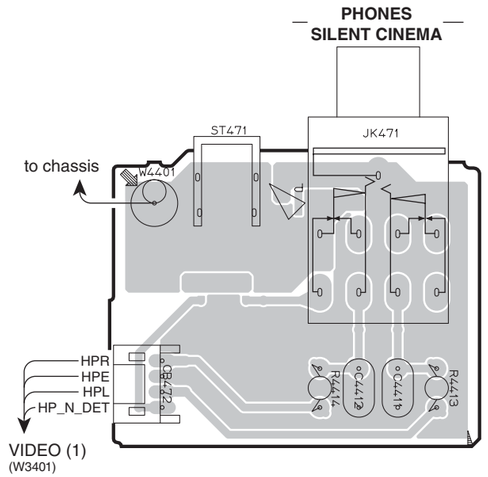


• Semiconductor Location

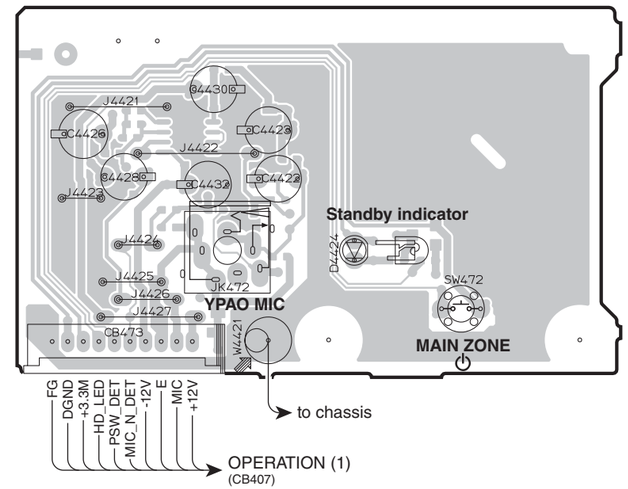
Ref no.	Location
D4203	G4
D4204	F3
D4205	E3
IC451	E4
IC452	E4
IC453	D4
IC454	C4
IC455	C2
IC456	E3

RX-V673/HTR-6065

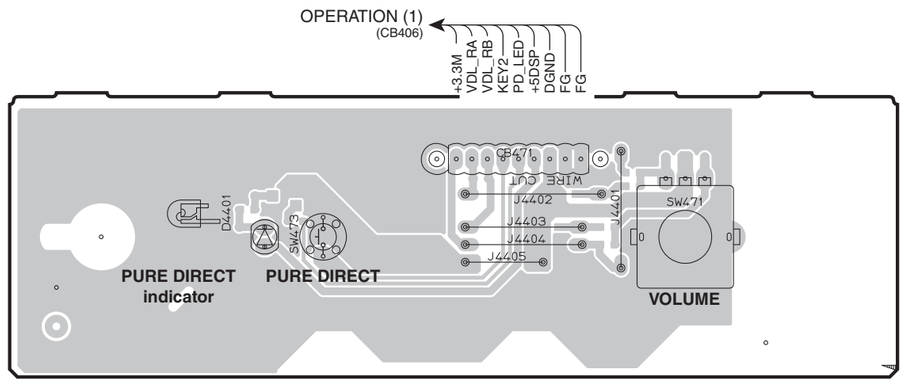
OPERATION (3) (Side A)



OPERATION (4) (Side A)



OPERATION (5) (Side A)

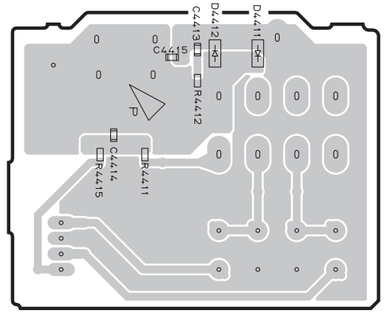


• Semiconductor Location

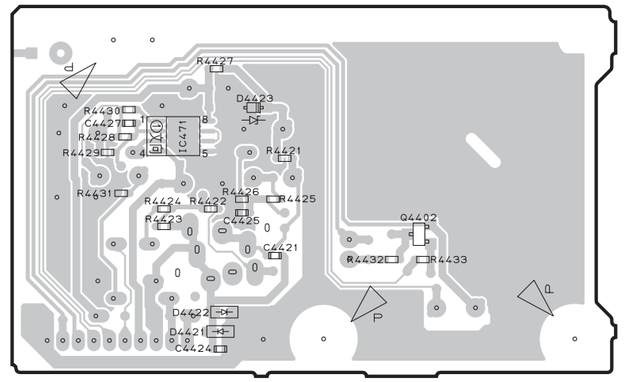
Ref no.	Location
D4401	C6
D4424	H3

RX-V673/HTR-6065

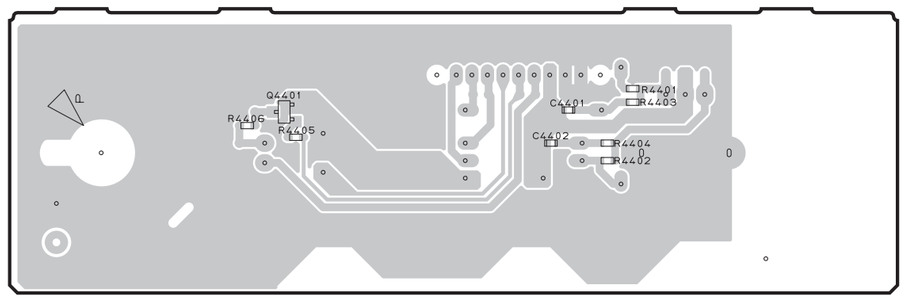
OPERATION (3) (Side B)



OPERATION (4) (Side B)



OPERATION (5) (Side B)

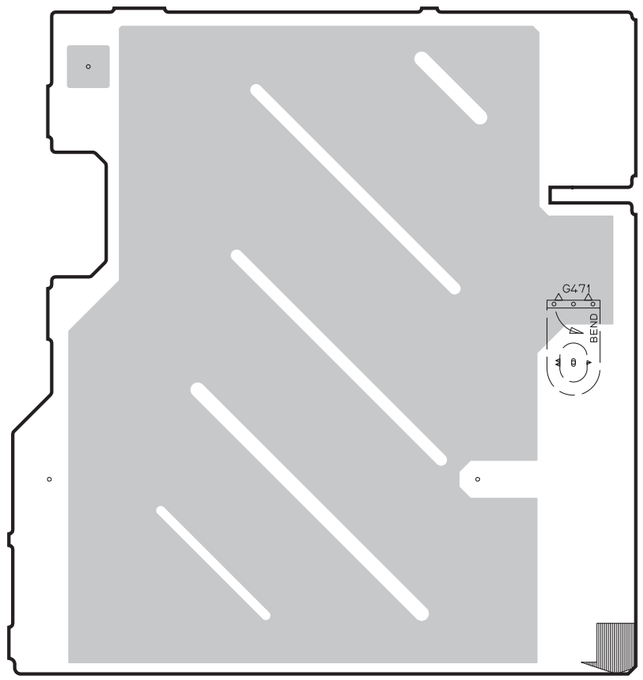


• Semiconductor Location

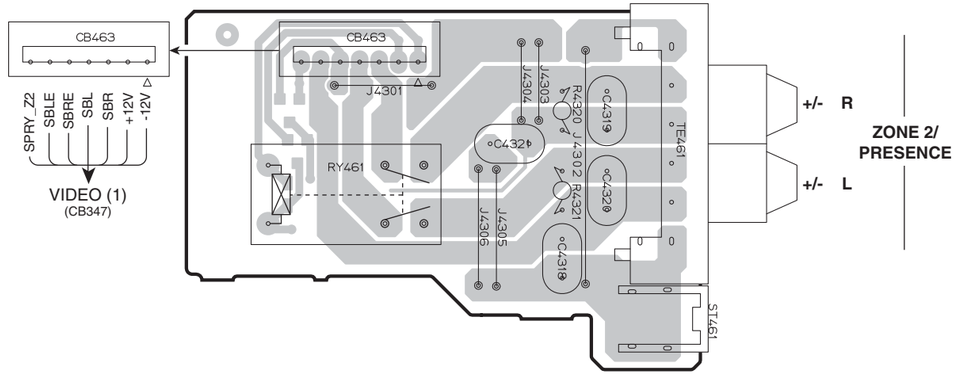
Ref no.	Location
D4411	C3
D4412	C3
D4421	G3
D4422	G3
D4423	H3
IC471	G3
Q4001	C6
Q4401	C6
Q4402	H3

RX-V673/HTR-6065

OPERATION (7) (Side A)

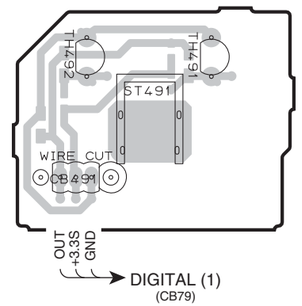


OPERATION (8) (Side A)



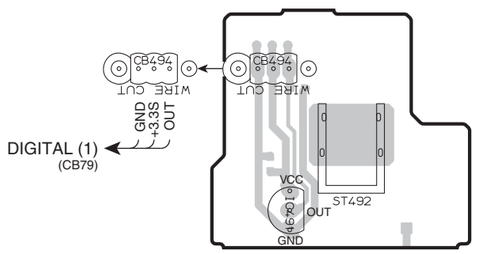
OPERATION (9) (Side A)

U, C models



OPERATION (10) (Side A)

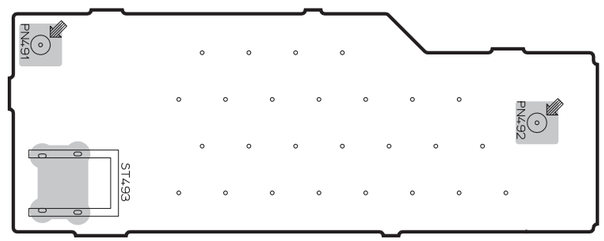
R, T, K, A, B, G, F, L, S, H models



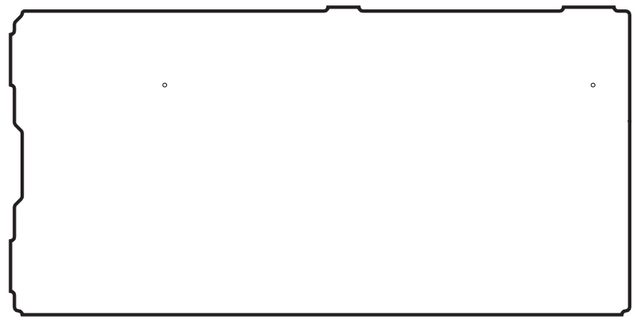
• Semiconductor Location

Ref no.	Location
IC491	B7

OPERATION (11) (Side A)

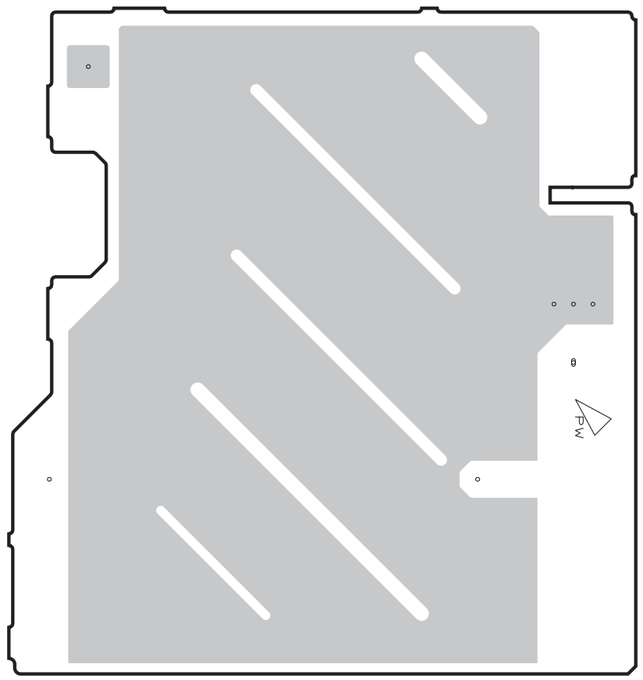


OPERATION (12) (Side A)

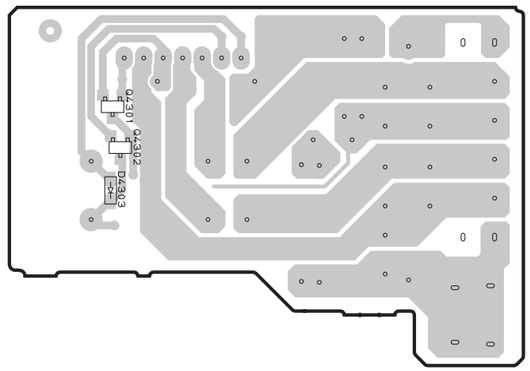


RX-V673/HTR-6065

OPERATION (7) (Side B)

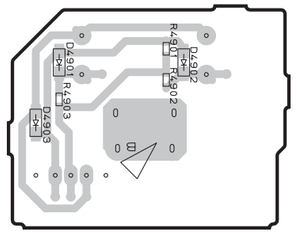


OPERATION (8) (Side B)



OPERATION (9) (Side B)

U, C models

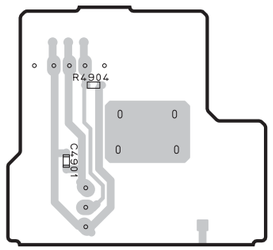


• Semiconductor Location

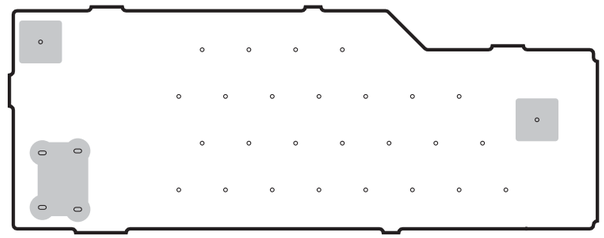
Ref no.	Location
D4303	E3
D4901	I3
D4902	I3
D4903	H3
Q4301	E3
Q4302	E3

OPERATION (10) (Side B)

R, T, K, A, B, G, F, L, S, H models



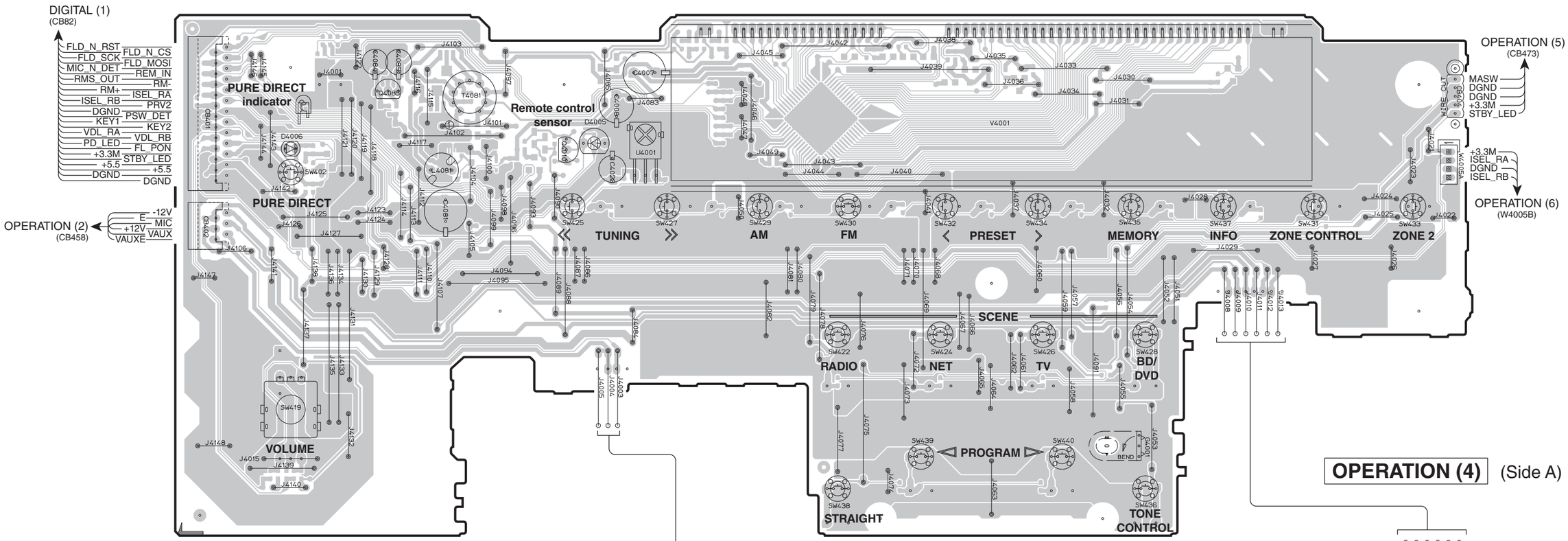
OPERATION (11) (Side B)



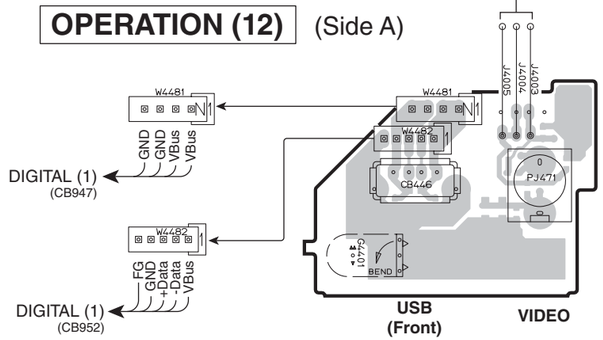
OPERATION (12) (Side B)

RX-A720

OPERATION (1) (Side A)



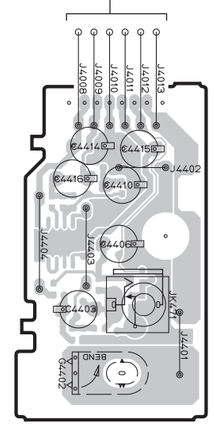
OPERATION (12) (Side A)



• Semiconductor Location

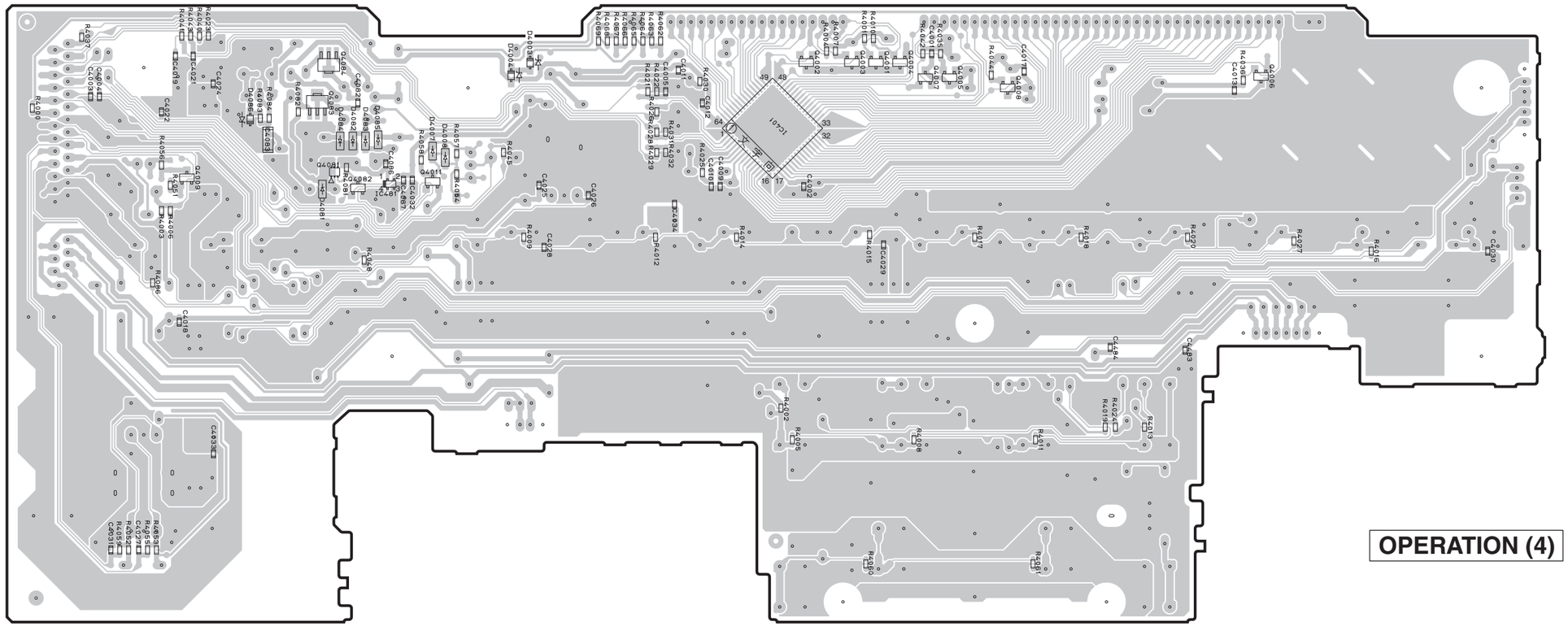
Ref no.	Location
D4005	D3
D4006	C3
Q4010	D3
Q4085	C3

OPERATION (4) (Side A)

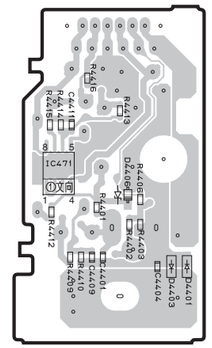


RX-A720

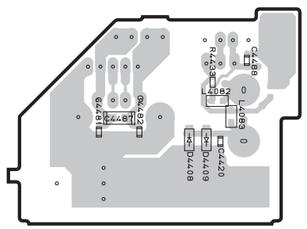
OPERATION (1) (Side B)



OPERATION (4) (Side B)



OPERATION (12) (Side B)

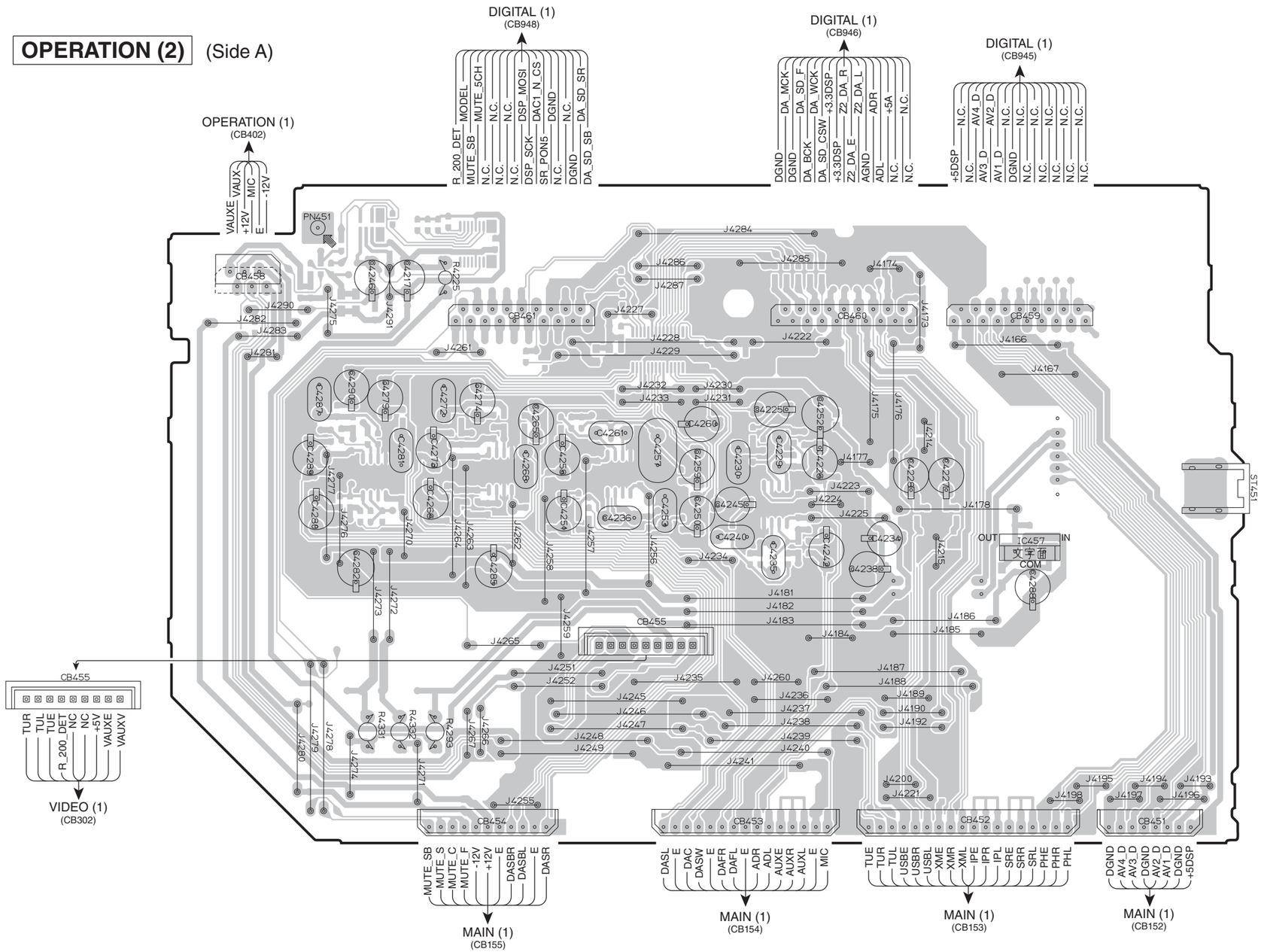


• Semiconductor Location

Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
D4003	D3	D4086	C3	Q4001	F3	Q4011	D3
D4004	D3	D4401	I6	Q4002	E3	Q4081	C3
D4007	D3	D4403	I6	Q4003	F3	Q4082	C3
D4008	D3	D4406	I6	Q4004	F3	Q4083	C3
D4081	C3	D4408	D7	Q4005	F3	Q4084	C3
D4082	C3	D4409	D7	Q4006	H3		
D4083	C3	IC401	E3	Q4007	F3		
D4084	C3	IC471	I6	Q4008	G3		
D4085	C3	IC481	C3	Q4009	B3		

RX-A720

OPERATION (2) (Side A)

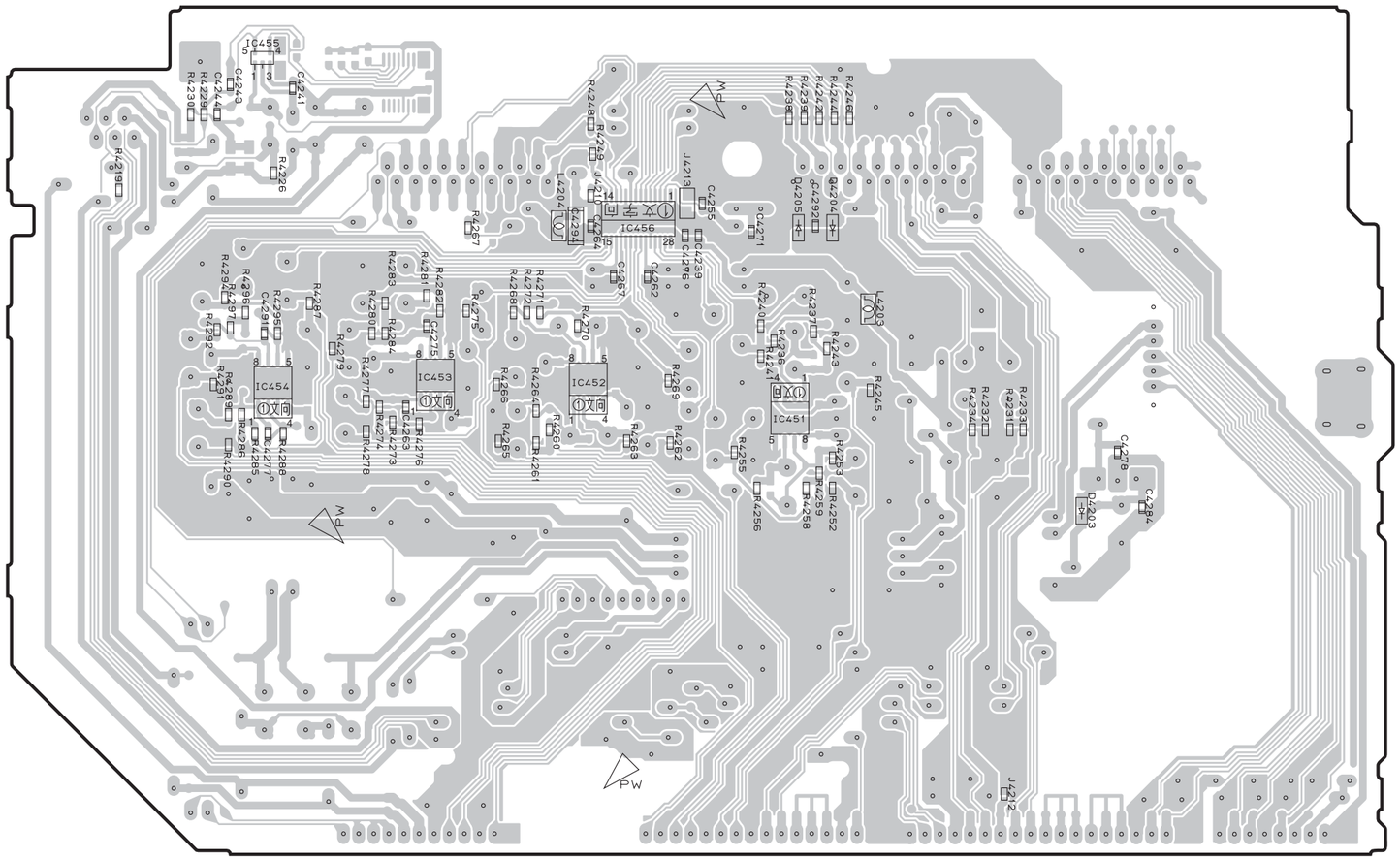


• Semiconductor Location

Ref no.	Location
IC457	G4

RX-A720

OPERATION (2) (Side B)

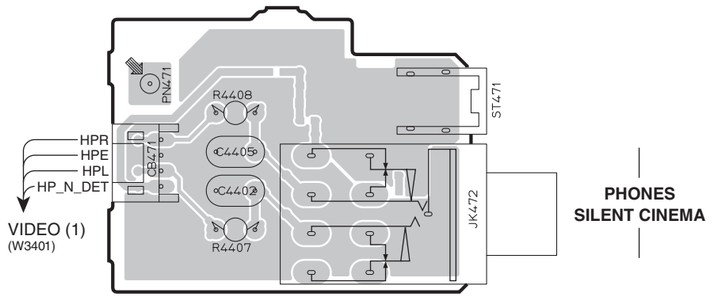


• Semiconductor Location

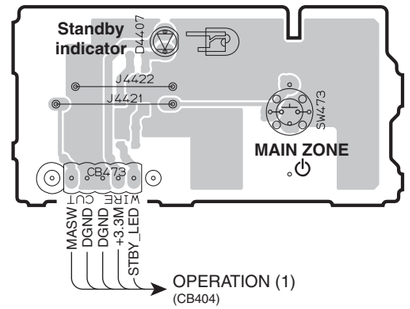
Ref no.	Location
D4203	G4
D4204	F3
D4205	E3
IC451	E4
IC452	E4
IC453	D4
IC454	C4
IC455	C2
IC456	E3

RX-A720

OPERATION (3) (Side A)



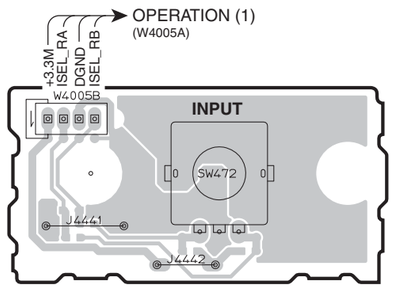
OPERATION (5) (Side A)



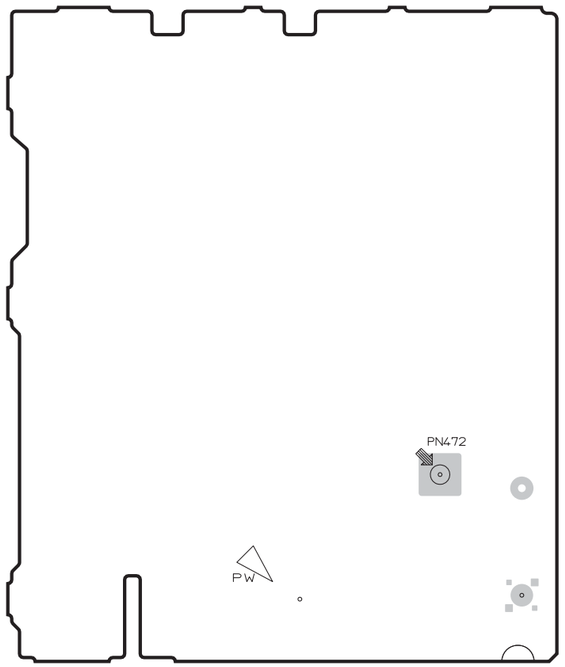
• Semiconductor Location

Ref no.	Location
D4407	H2

OPERATION (6) (Side A)

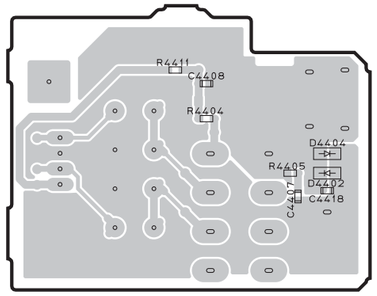


OPERATION (7) (Side A)

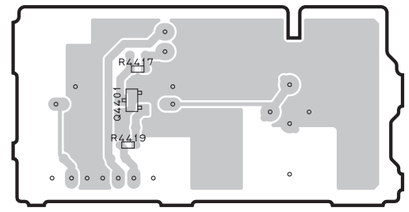


RX-A720

OPERATION (3) (Side B)



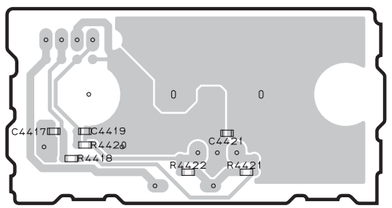
OPERATION (5) (Side B)



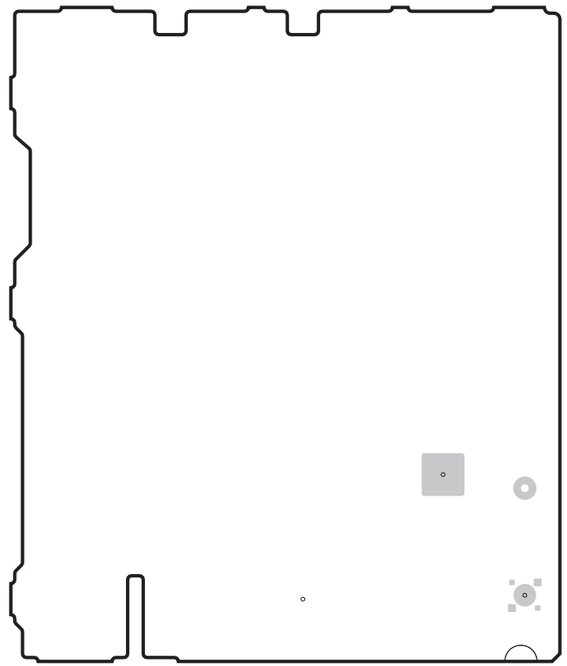
• Semiconductor Location

Ref no.	Location
D4402	C3
D4404	C3
Q4401	G3

OPERATION (6) (Side B)

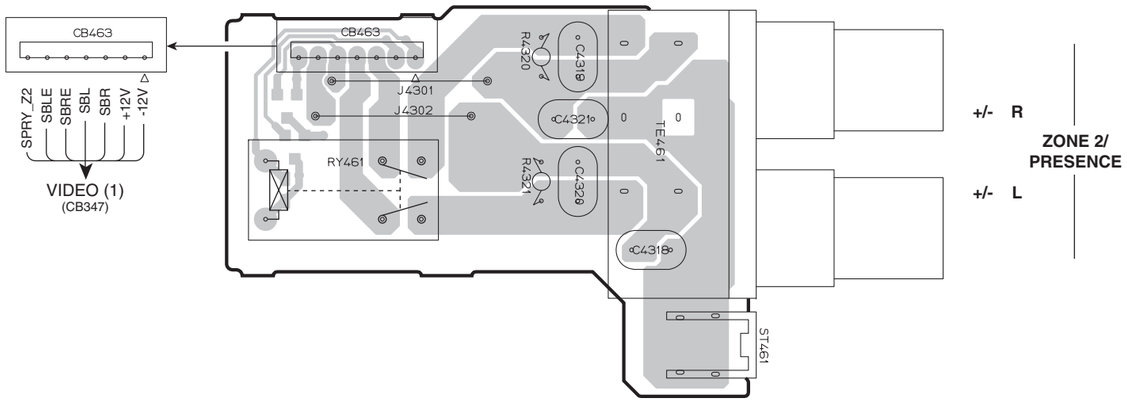


OPERATION (7) (Side B)



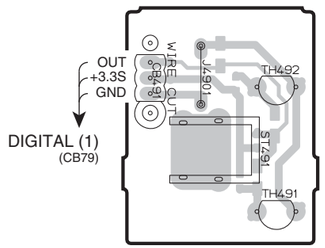
RX-A720

OPERATION (8) (Side A)



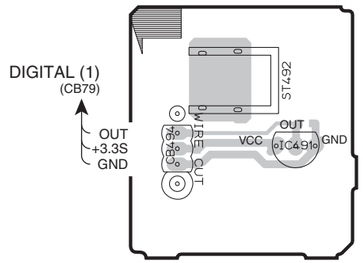
OPERATION (9) (Side A)

U, C models



OPERATION (10) (Side A)

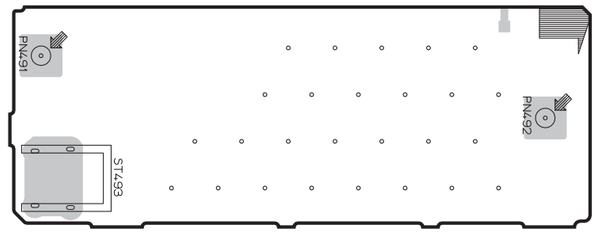
A model



• Semiconductor Location

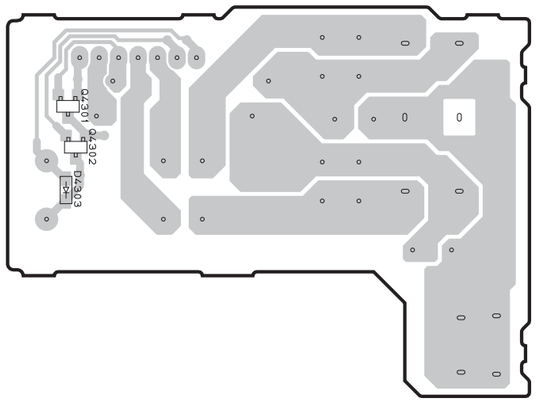
Ref no.	Location
IC491	D6

OPERATION (11) (Side A)



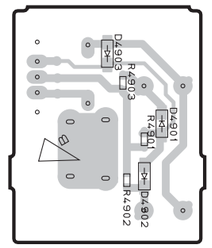
RX-A720

OPERATION (8) (Side B)



OPERATION (9) (Side B)

U, C models

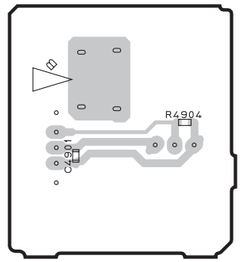


• Semiconductor Location

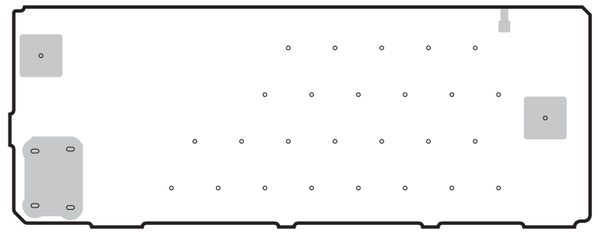
Ref no.	Location
D4303	B3
D4901	G3
D4902	G3
D4903	G2
Q4301	B2
Q4302	B3

OPERATION (10) (Side B)

A model

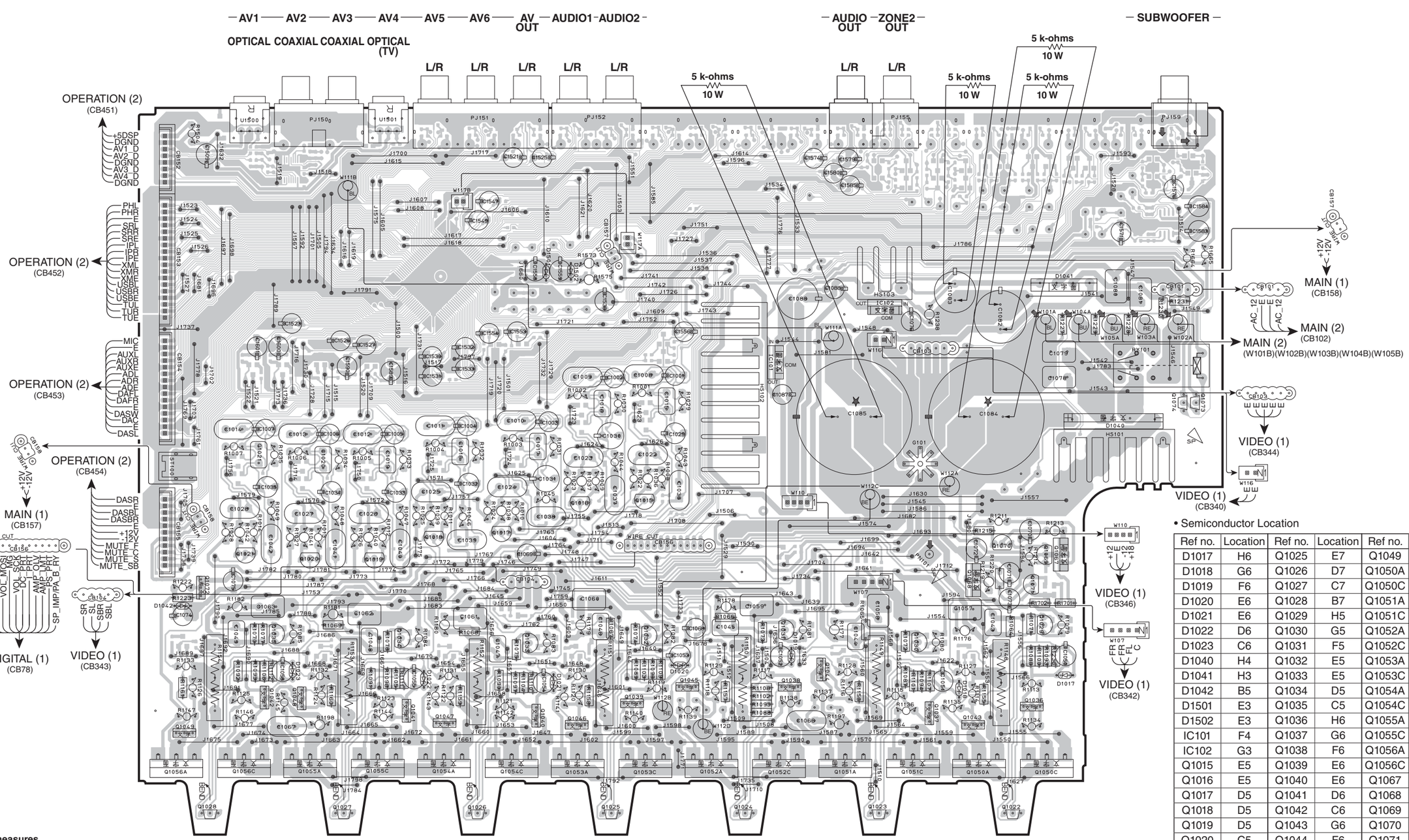


OPERATION (11) (Side B)



RX-V673/HTR-6065 | **RX-A720**

MAIN (1) (Side A)



Safety measures

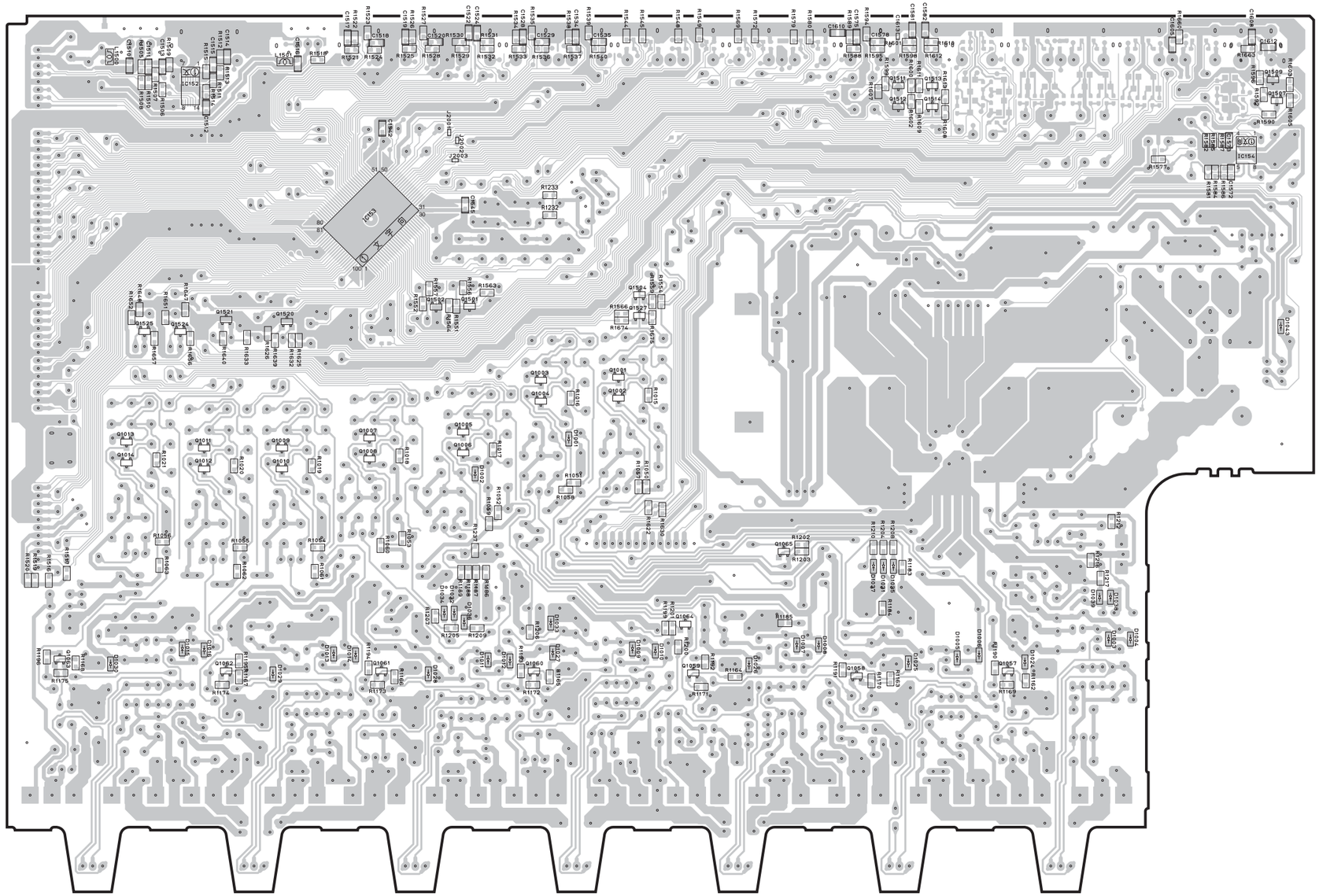
- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.
  C1082–C1085 on MAIN (1) P.C.B.

- Semiconductor Location

Ref no.	Location	Ref no.	Location	Ref no.	Location
D1017	H6	Q1025	E7	Q1049	B6
D1018	G6	Q1026	D7	Q1050A	G6
D1019	F6	Q1027	C7	Q1050C	H6
D1020	E6	Q1028	B7	Q1051A	G6
D1021	E6	Q1029	H5	Q1051C	G6
D1022	D6	Q1030	G5	Q1052A	F6
D1023	C6	Q1031	F5	Q1052C	F6
D1040	H4	Q1032	E5	Q1053A	E6
D1041	H3	Q1033	E5	Q1053C	E6
D1042	B5	Q1034	D5	Q1054A	D6
D1501	E3	Q1035	C5	Q1054C	D6
D1502	E3	Q1036	H6	Q1055A	C6
IC101	F4	Q1037	G6	Q1055C	D6
IC102	G3	Q1038	F6	Q1056A	B6
Q1015	E5	Q1039	E6	Q1056C	C6
Q1016	E5	Q1040	E6	Q1067	H5
Q1017	D5	Q1041	D6	Q1068	G5
Q1018	D5	Q1042	C6	Q1069	H5
Q1019	D5	Q1043	G6	Q1070	H5
Q1020	C5	Q1044	F6	Q1071	H5
Q1021	C5	Q1045	F6	Q1072	B5
Q1022	H7	Q1046	E6	Q1073	I4
Q1023	G7	Q1047	D6	Q1074	I4
Q1024	F7	Q1048	C6		

RX-V673/HTR-6065 | **RX-A720**

MAIN (1) (Side B)

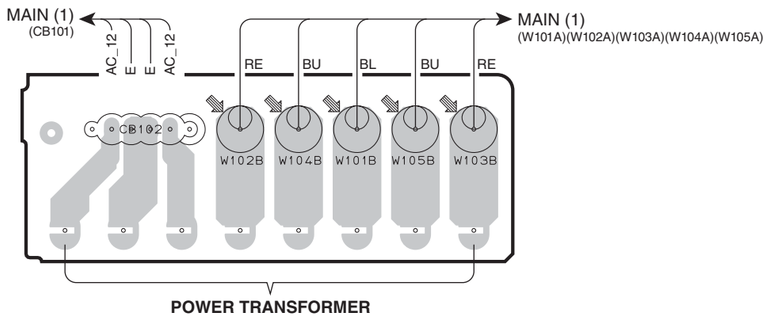


• Semiconductor Location

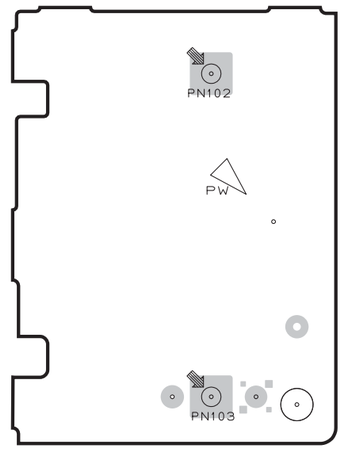
Ref no.	Location	Ref no.	Location
D1001	D4	Q1002	E4
D1002	D4	Q1003	D4
D1003	G5	Q1004	D4
D1004	G5	Q1005	D4
D1005	G5	Q1006	D4
D1006	G5	Q1007	C4
D1007	F5	Q1008	C4
D1008	F5	Q1009	C4
D1009	E5	Q1010	C4
D1010	E5	Q1011	C4
D1011	D5	Q1012	C4
D1012	D5	Q1013	B4
D1013	C5	Q1014	B4
D1014	C5	Q1057	G5
D1015	B5	Q1058	F6
D1016	C5	Q1059	E6
D1024	G5	Q1060	D6
D1025	F5	Q1061	C6
D1026	E5	Q1062	C6
D1027	D5	Q1063	B5
D1028	D6	Q1064	E5
D1029	C6	Q1065	F5
D1030	B5	Q1501	D4
D1031	F5	Q1502	D4
D1032	D5	Q1504	E4
D1033	D5	Q1507	H2
D1034	D5	Q1509	H2
D1035	F5	Q1511	F2
D1036	D5	Q1512	F2
D1037	F5	Q1513	F2
D1038	G5	Q1514	F2
D1039	G5	Q1520	C4
D1043	H4	Q1521	C4
IC152	B2	Q1524	B4
IC153	C3	Q1525	B4
IC154	H3	Q1527	E4
Q1001	E4		

RX-V673/HTR-6065 | **RX-A720**

MAIN (2) (Side A)

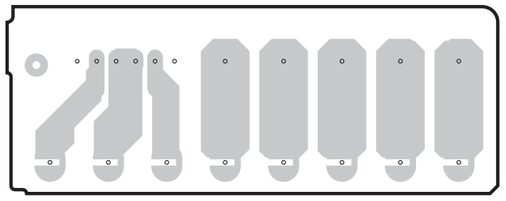


MAIN (6) (Side A)

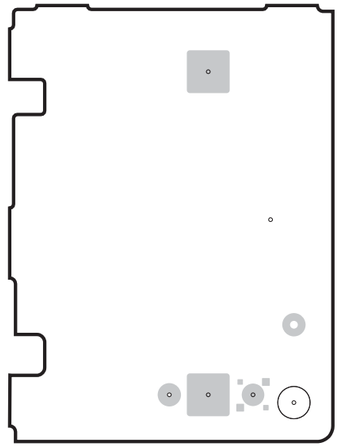


RX-V673/HTR-6065 | **RX-A720**

MAIN (2) (Side B)

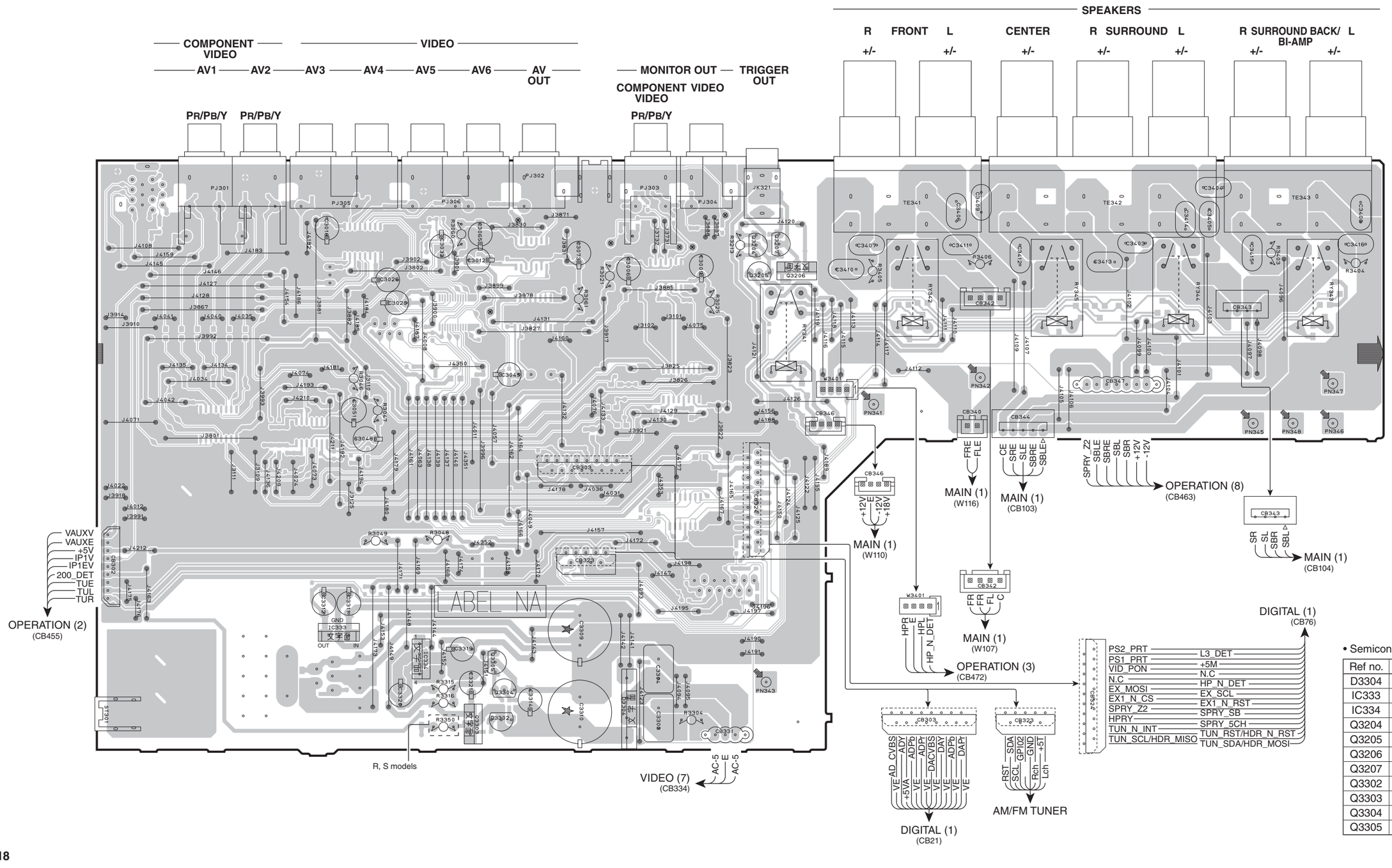


MAIN (6) (Side B)



RX-V673/HTR-6065

VIDEO (1) (Side A)



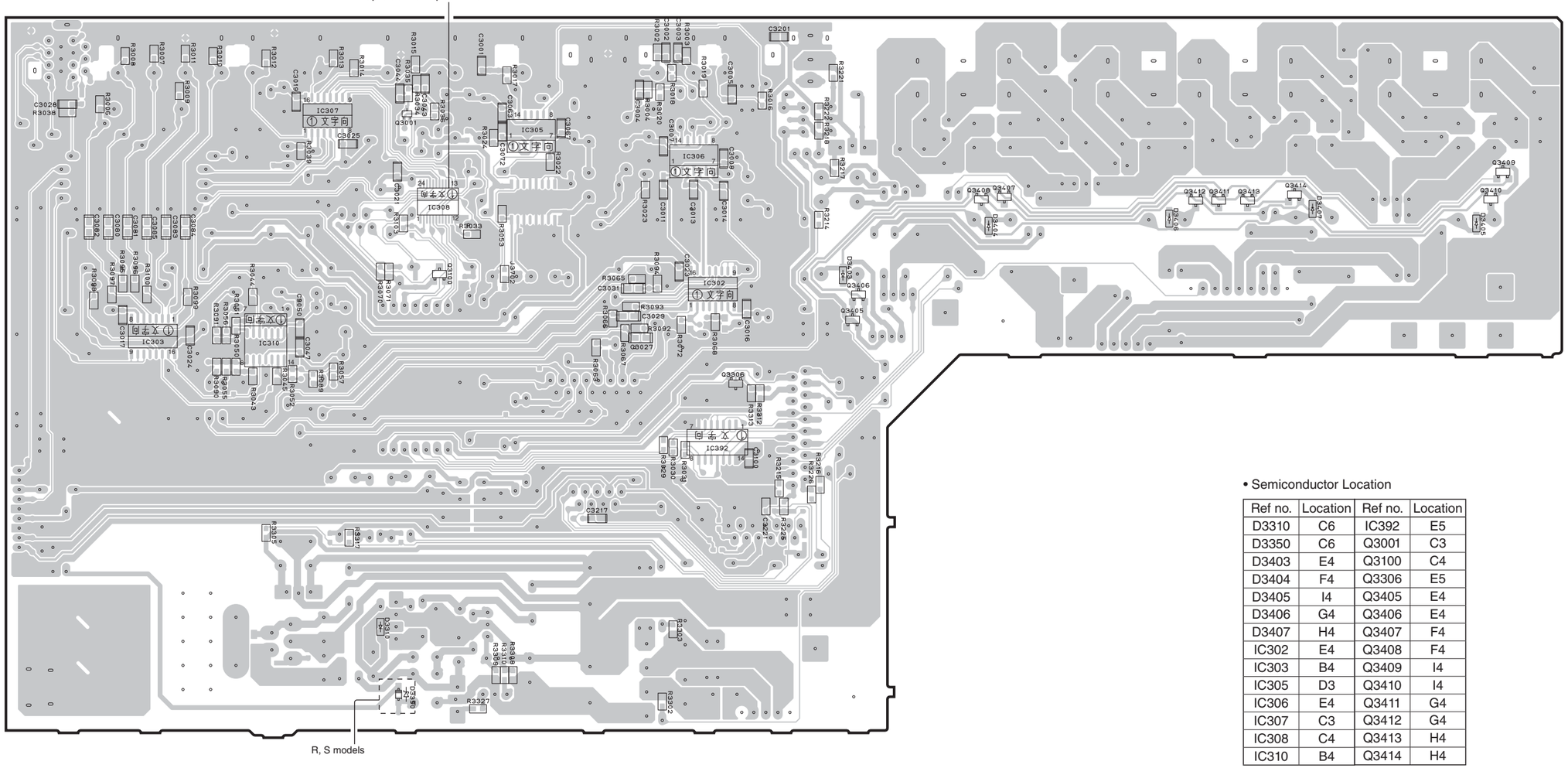
• Semiconductor Location

Ref no.	Location
D3304	E6
IC333	C6
IC334	D6
Q3204	F3
Q3205	F3
Q3206	F3
Q3207	F3
Q3302	D6
Q3303	D6
Q3304	D6
Q3305	D6

RX-V673/HTR-6065

VIDEO (1) (Side B)

No replacement part available.

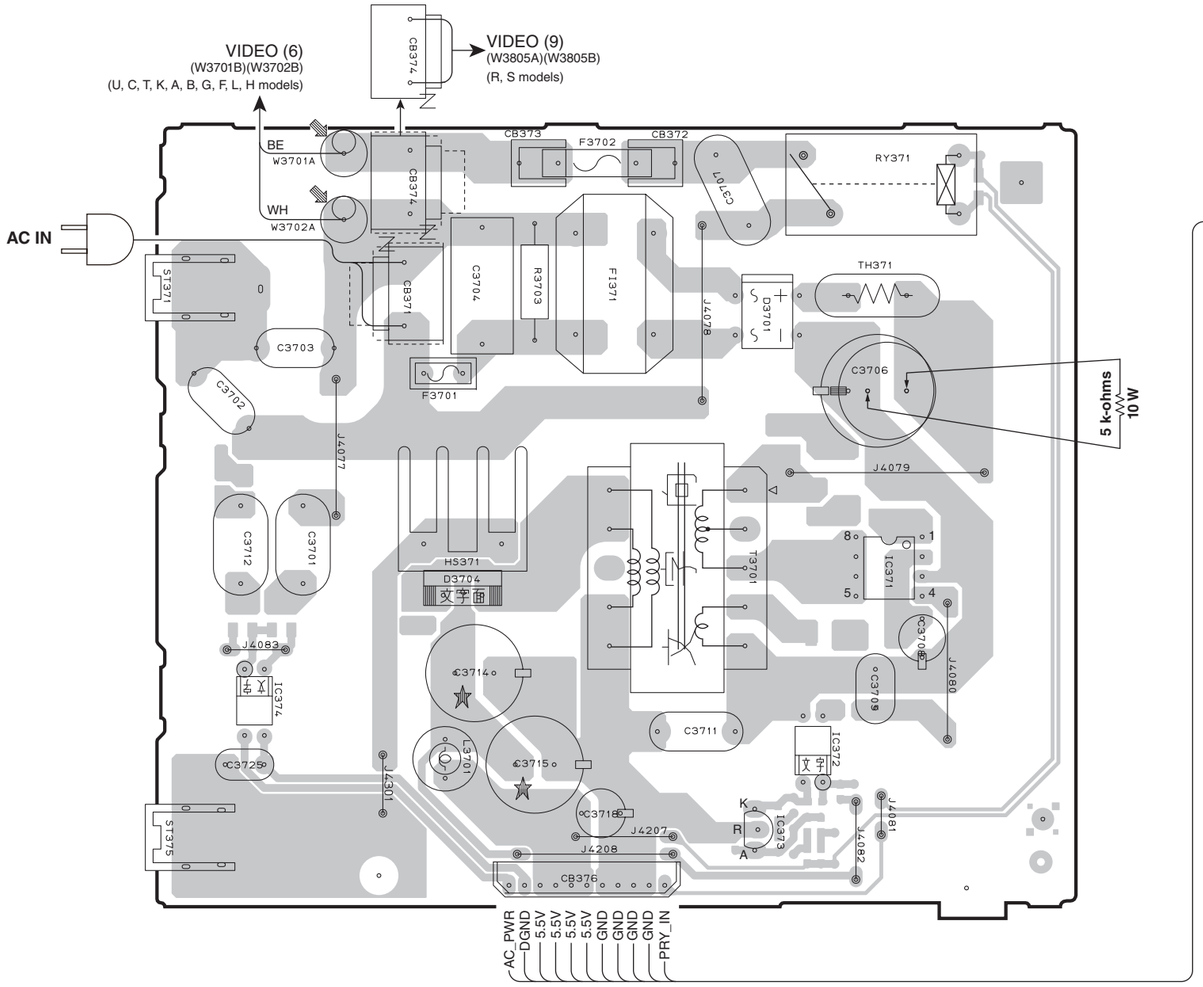


• Semiconductor Location

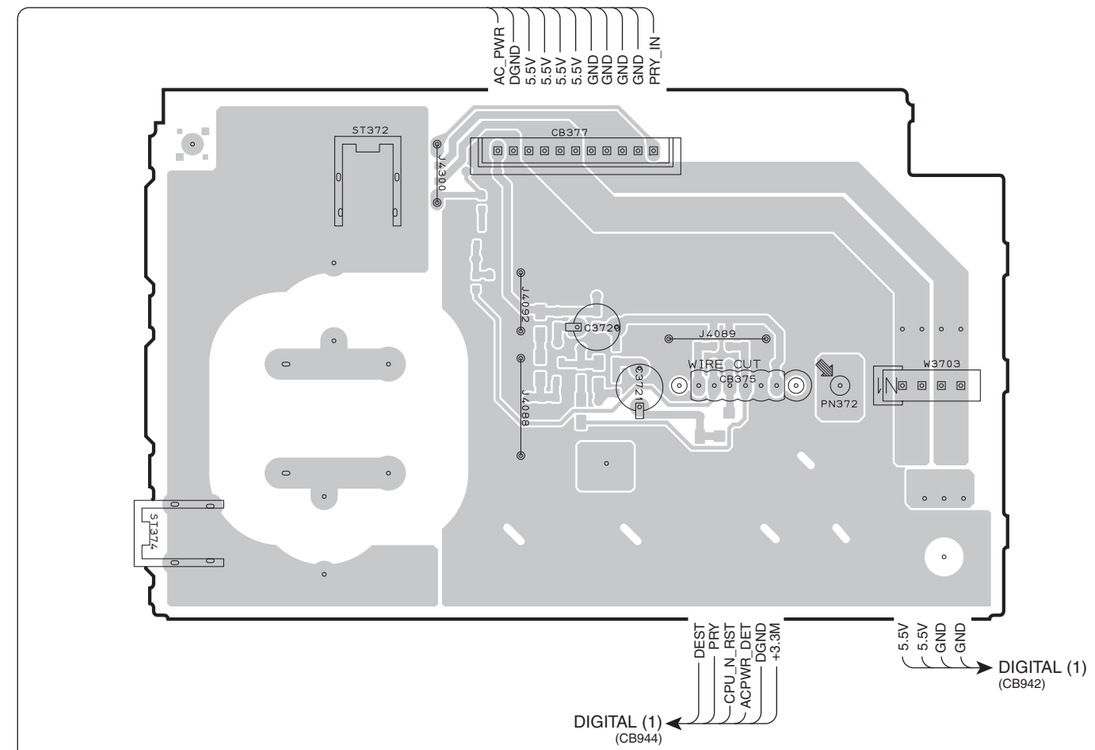
Ref no.	Location	Ref no.	Location
D3310	C6	IC392	E5
D3350	C6	Q3001	C3
D3403	E4	Q3100	C4
D3404	F4	Q3306	E5
D3405	I4	Q3405	E4
D3406	G4	Q3406	E4
D3407	H4	Q3407	F4
IC302	E4	Q3408	F4
IC303	B4	Q3409	I4
IC305	D3	Q3410	I4
IC306	E4	Q3411	G4
IC307	C3	Q3412	G4
IC308	C4	Q3413	H4
IC310	B4	Q3414	H4

RX-V673/HTR-6065

VIDEO (2) (Side A)



VIDEO (3) (Side A)



Safety measures

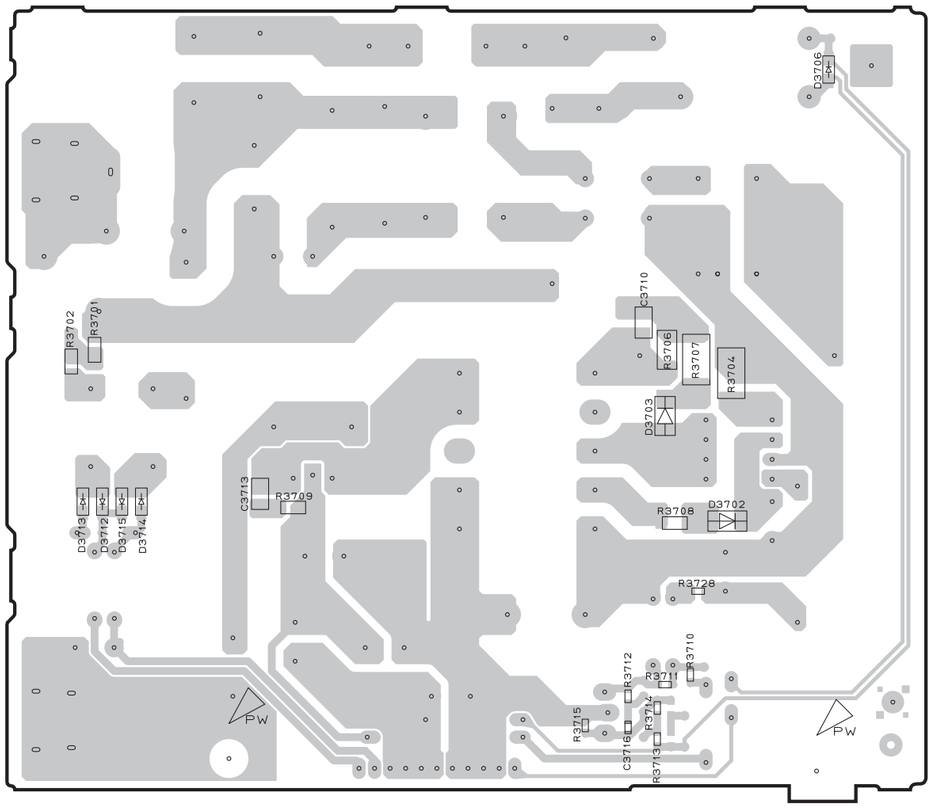
- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.
  C3706 on VIDEO (2) P.C.B.

• Semiconductor Location

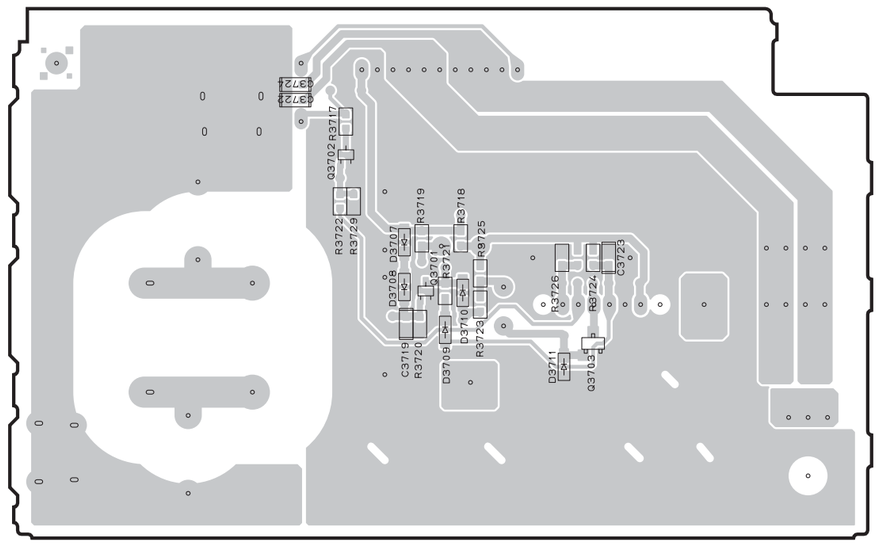
Ref no.	Location
D3701	D3
D3704	C4
IC371	E4
IC372	D5
IC373	D5
IC374	B4

RX-V673/HTR-6065

VIDEO (2) (Side B)



VIDEO (3) (Side B)

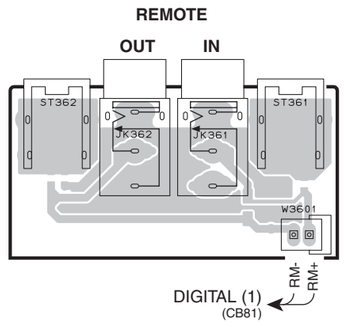


• Semiconductor Location

Ref no.	Location
D3702	D4
D3703	D4
D3706	E2
D3707	H4
D3708	H4
D3709	H4
D3710	H4
D3711	H4
D3712	B4
D3713	A4
D3714	B4
D3715	B4
Q3701	H4
Q3702	G3
Q3703	H4

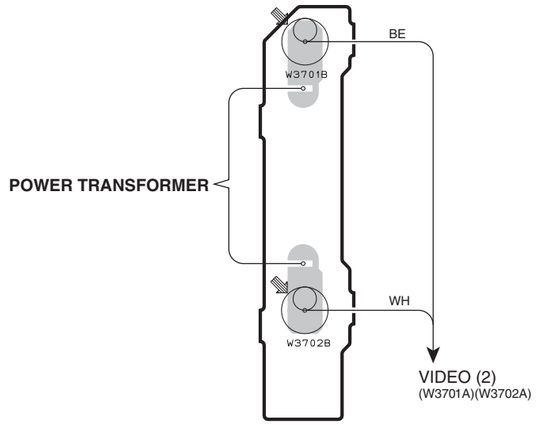
RX-V673/HTR-6065

VIDEO (4) (Side A)

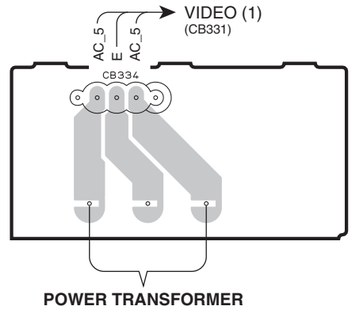


VIDEO (6) (Side A)

U, C, T, K, A, B, G, F, L, H models

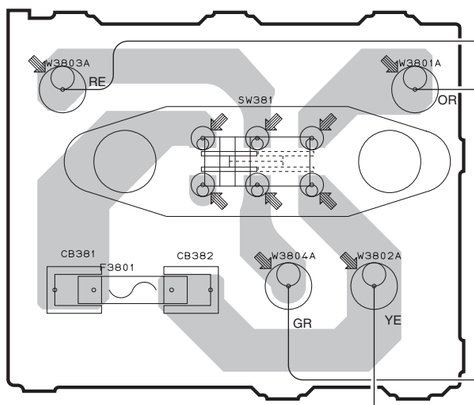


VIDEO (7) (Side A)



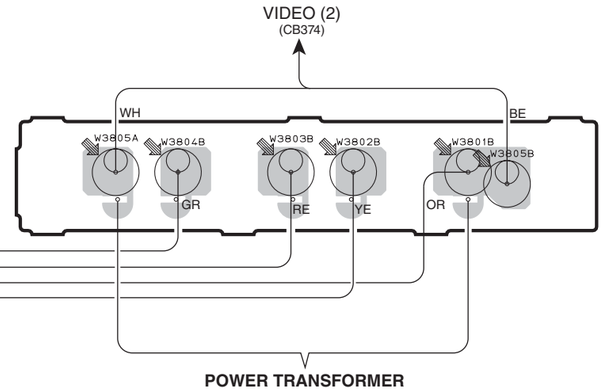
VIDEO (8) (Side A)

R, S models



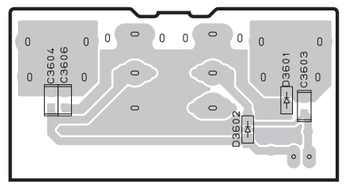
VIDEO (9) (Side A)

R, S models



RX-V673/HTR-6065

VIDEO (4) (Side B)

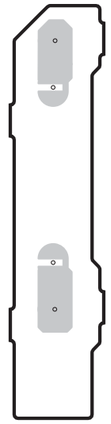


• Semiconductor Location

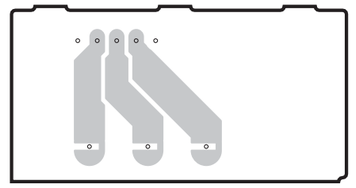
Ref no.	Location
D3601	B3
D3602	B3

VIDEO (6) (Side B)

U, C, T, K, A, B, G, F, L, H models

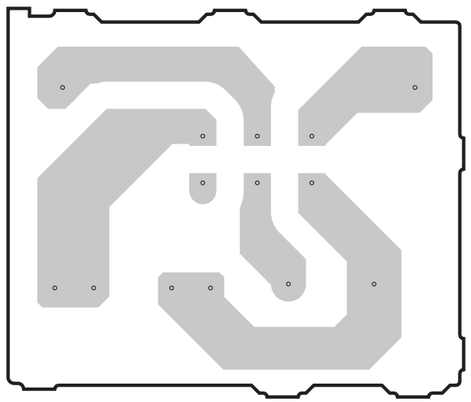


VIDEO (7) (Side B)



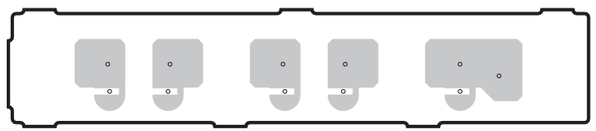
VIDEO (8) (Side B)

R, S models



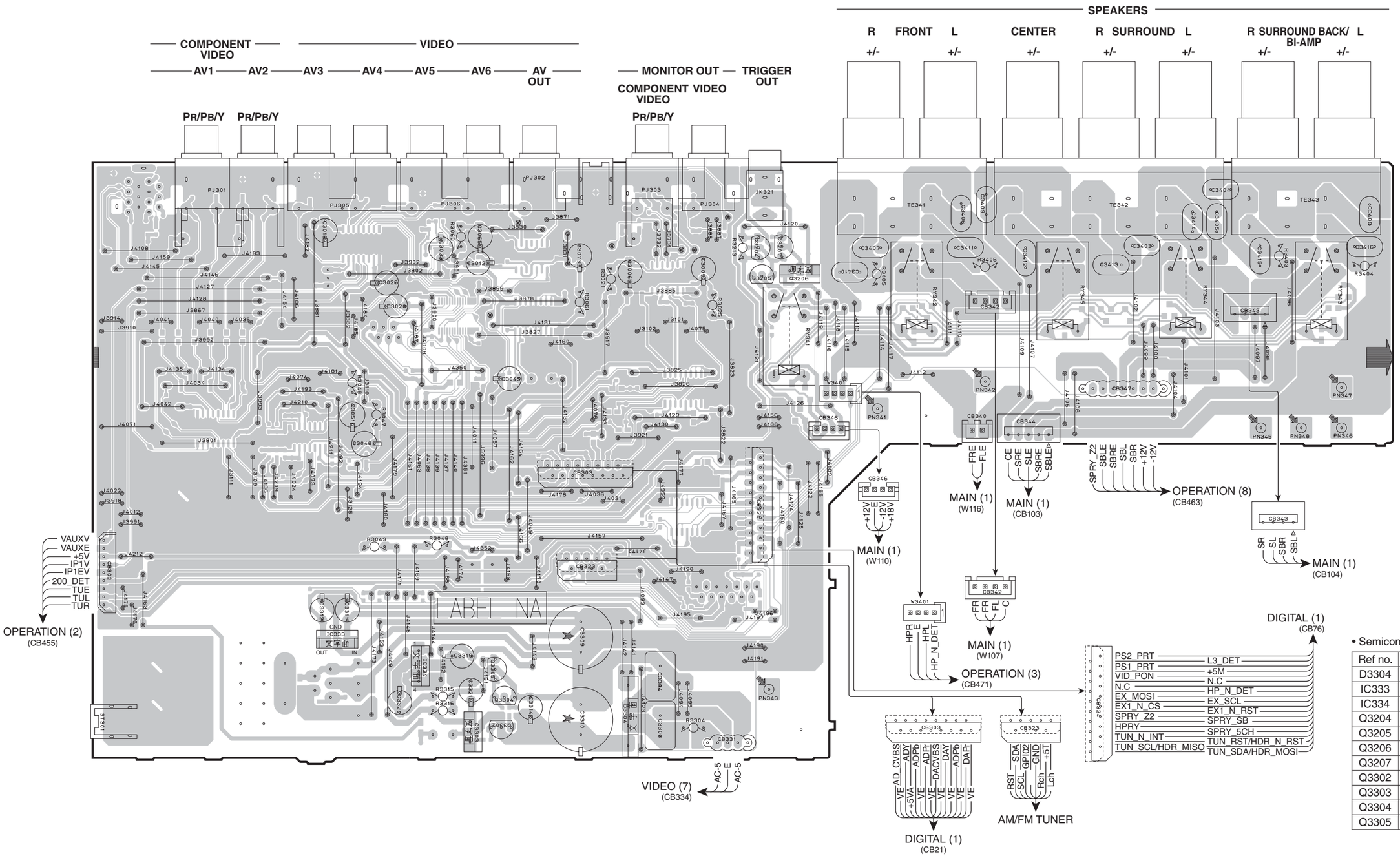
VIDEO (9) (Side B)

R, S models



RX-A720

VIDEO (1) (Side A)



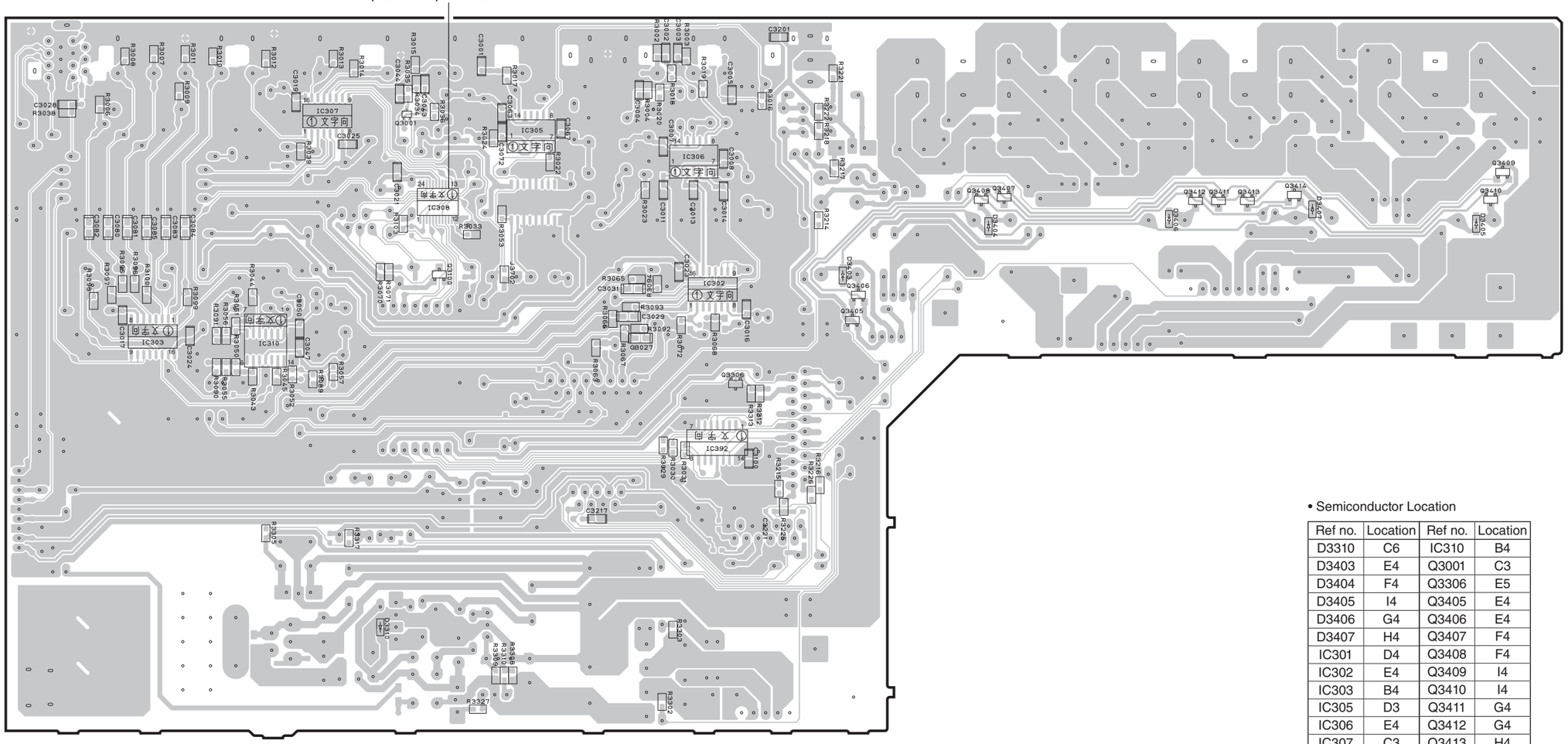
• Semiconductor Location

Ref no.	Location
D3304	E6
IC333	C6
IC334	D6
Q3204	F3
Q3205	F3
Q3206	F3
Q3207	F3
Q3302	D6
Q3303	D6
Q3304	D6
Q3305	D6

RX-A720

VIDEO (1) (Side B)

No replacement part available.

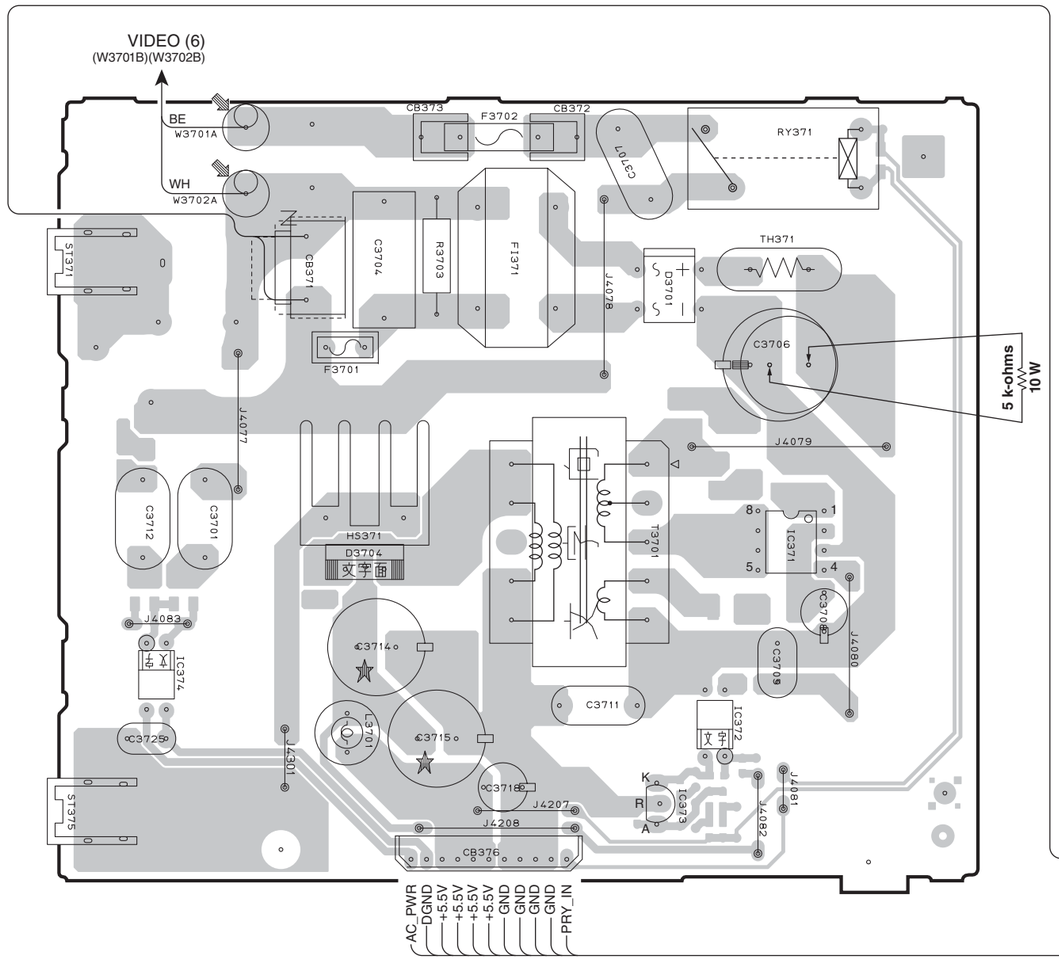


• Semiconductor Location

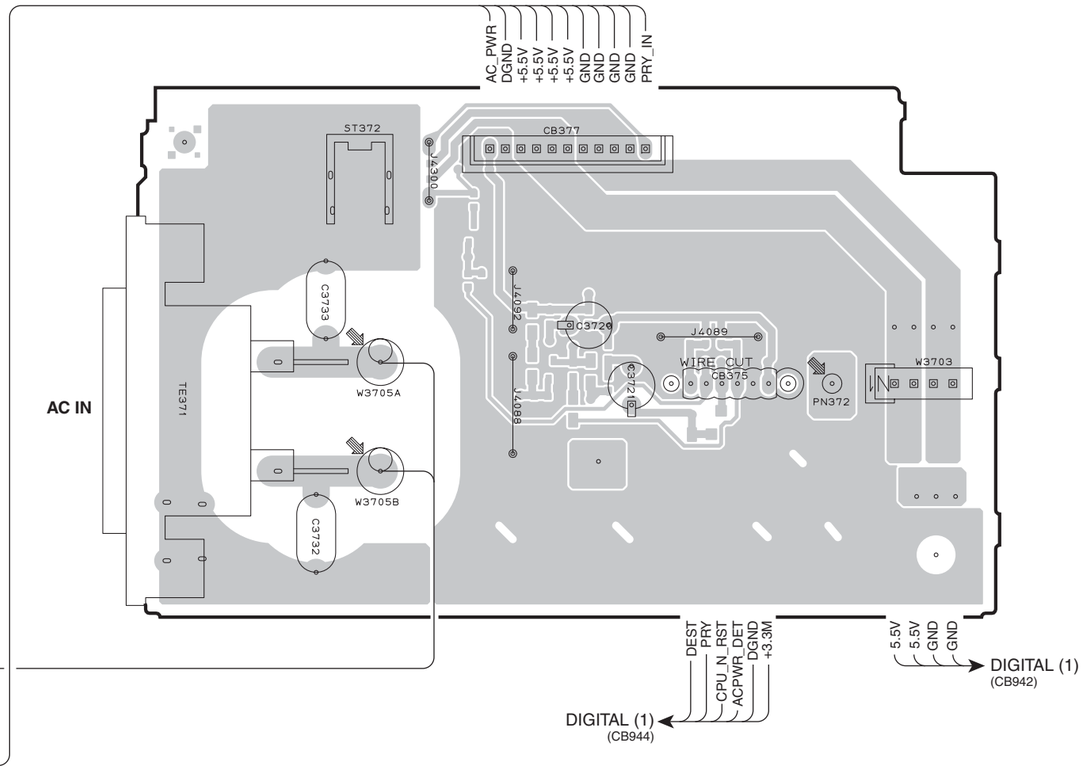
Ref no.	Location	Ref no.	Location
D3310	C6	IC310	B4
D3403	E4	Q3001	C3
D3404	F4	Q3306	E5
D3405	I4	Q3405	E4
D3406	G4	Q3406	E4
D3407	H4	Q3407	F4
IC301	D4	Q3408	F4
IC302	E4	Q3409	I4
IC303	B4	Q3410	I4
IC305	D3	Q3411	G4
IC306	E4	Q3412	G4
IC307	C3	Q3413	H4
IC308	C4	Q3414	H4

RX-A720

VIDEO (2) (Side A)



VIDEO (3) (Side A)



• Semiconductor Location

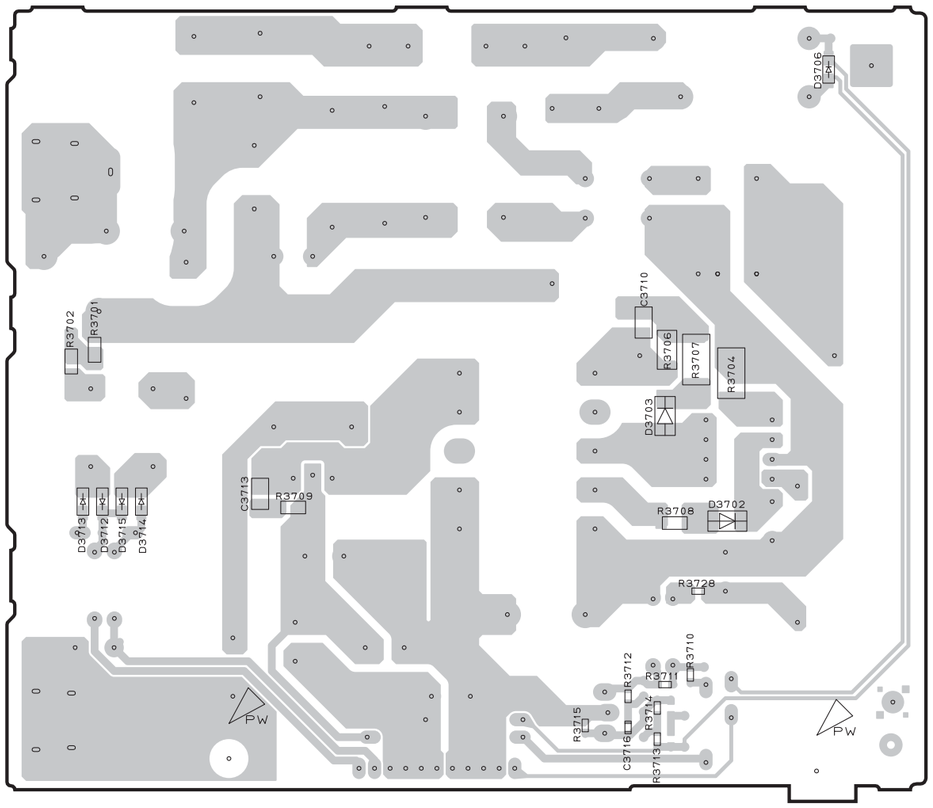
Ref no.	Location
D3701	D3
D3704	C4
IC371	E4
IC372	D5
IC373	D5
IC374	B4

Safety measures

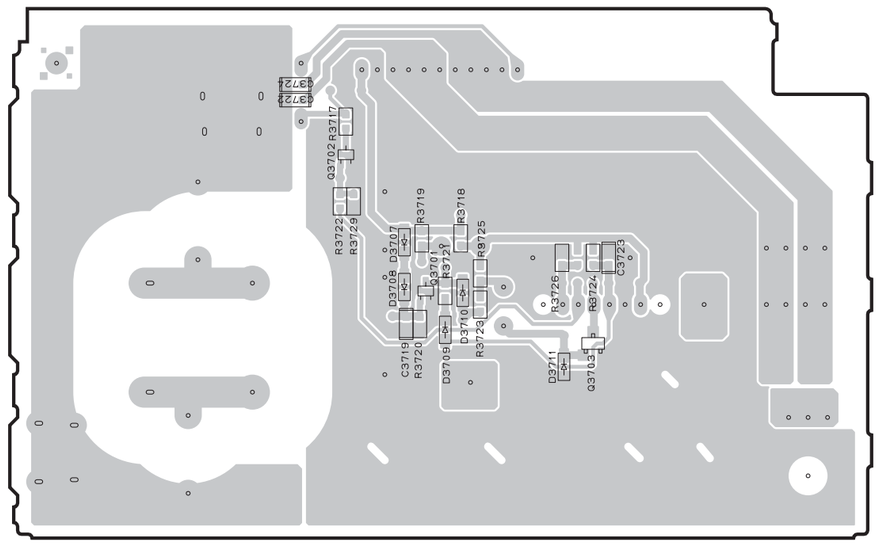
- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.
  C3706 on VIDEO (2) P.C.B.

RX-A720

VIDEO (2) (Side B)



VIDEO (3) (Side B)

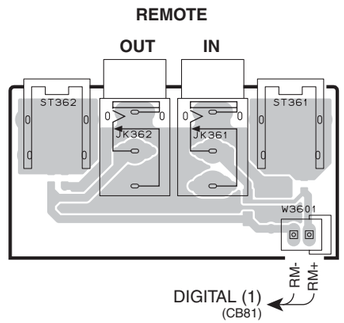


• Semiconductor Location

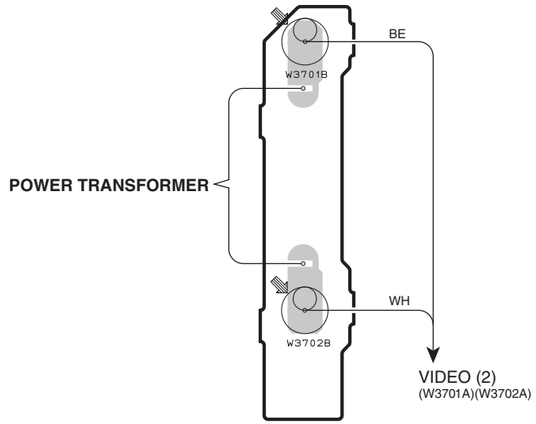
Ref no.	Location
D3702	D4
D3703	D4
D3706	E2
D3707	H4
D3708	H4
D3709	H4
D3710	H4
D3711	H4
D3712	B4
D3713	A4
D3714	B4
D3715	B4
Q3701	H4
Q3702	G3
Q3703	H4

RX-A720

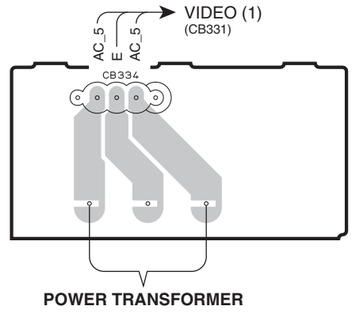
VIDEO (4) (Side A)



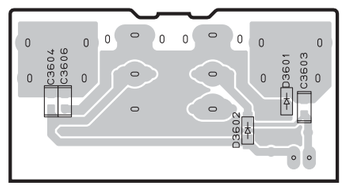
VIDEO (6) (Side A)



VIDEO (7) (Side A)



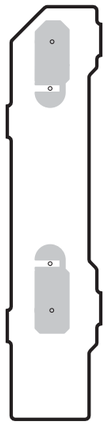
VIDEO (4) (Side B)



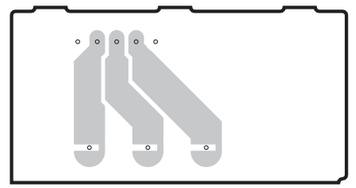
• Semiconductor Location

Ref no.	Location
D3601	C6
D3602	C6

VIDEO (6) (Side B)



VIDEO (7) (Side B)



■ SCHEMATIC DIAGRAMS RX-V673/HTR-6065 RX-A720

DIGITAL 1/8

Page 130 L7
to DIGITAL (2)_CB36

HDMI IN-7 HDMI IN-6 A820 only FRONT IN

HDMI 5 HDMI IN-5 | HDMI 4 HDMI IN-4 | HDMI 3 HDMI IN-3 | HDMI 2 HDMI IN-2 | HDMI 1 (BD/DVD) HDMI IN-1

105 Ω

2PP

I2C add:0xB2

HDMI SWITCHER

YD940A0

IC2

SII9589-3CTUC

No replacement part available.

5V :12mA
3.3V:239mA
1.2V:374mA

I2C add:0xB0

HDMI SWITCHER

YD940A0

IC1

SII9589-3CTUC

No replacement part available.

5V :12mA
3.3V:239mA
1.2V:374mA

RESISTOR		
REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR	(P=5)
⚠	CARBON FILM RESISTOR	(P=10)
△	METAL OXIDE FILM RESISTOR	
▲	METAL FILM RESISTOR	
⊠	METAL PLATE RESISTOR	
◪	FIRE PROOF CARBON FILM RESISTOR	
□	CEMENT MOLDED RESISTOR	
⊘	SEMI VARIABLE RESISTOR	
■	CHIP RESISTOR	

CAPACITOR		
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊟
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⊣⊢
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
ⓘ	MICA CAPACITOR	
ⓒ	POLYPROPYLENE FILM CAPACITOR	
⊛	SEMICONDUCTIVE CERAMIC CAPACITOR	
⊙	POLYPHENYLENE SULFIDE FILM CAPACITOR	

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(E)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(P)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

空きスペースに置くもの

ALSB:L
I2C add:0x98

HDMI RECEIVER

YD893A0

IC3

ADV7619BSVZ

No replacement part available.

DVDDIO,TVDD:3.3V
DVDD,PVDD,CVDD:1.8V

3.3V:101mA
1.8V:475mA

No replacement part available.

to 004.aht (HDMI Tx) to DIGITAL 4/8

to 005.aht (u-Com) to DIGITAL 5/8

to DIGITAL 3/8

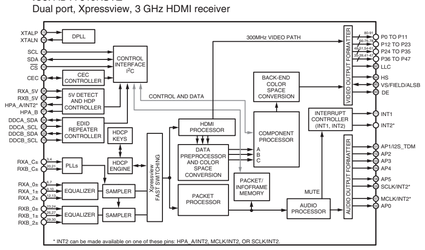
to 003.aht (FPGA)

DIGITAL (1)

Sheet1:HDMI Rx

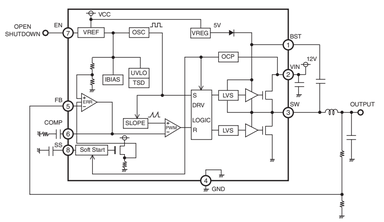
IC/CB/XL:1-19,40-44
OHTER :1-249,400-449

IC3: ADV7619KSVZ
Dual port, Xpressview, 3 GHz HDMI receiver

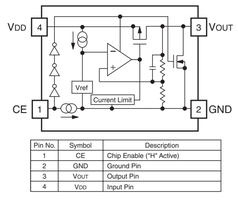


* INT2 can be made available on one of these pins: HPA_A/INT2, MCLK/INT2, OR SCLK/INT2.

IC4: BD9329AEFJ-E2
1ch step-down DC/DC converter

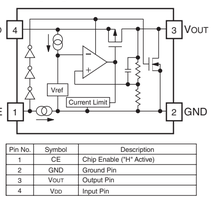


IC6: RP130Q181D-TR-F
Voltage regulator



Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

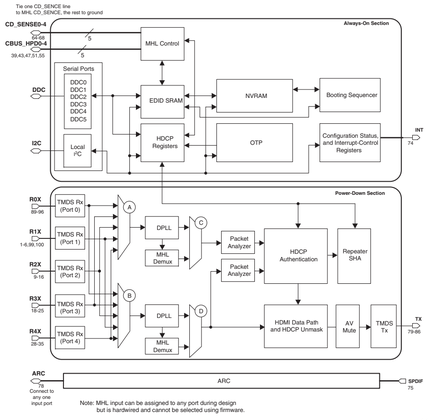
IC8: RP130Q501D-TR-F
Voltage regulator



Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

IC10: TC7SH08FU
2-input AND gate

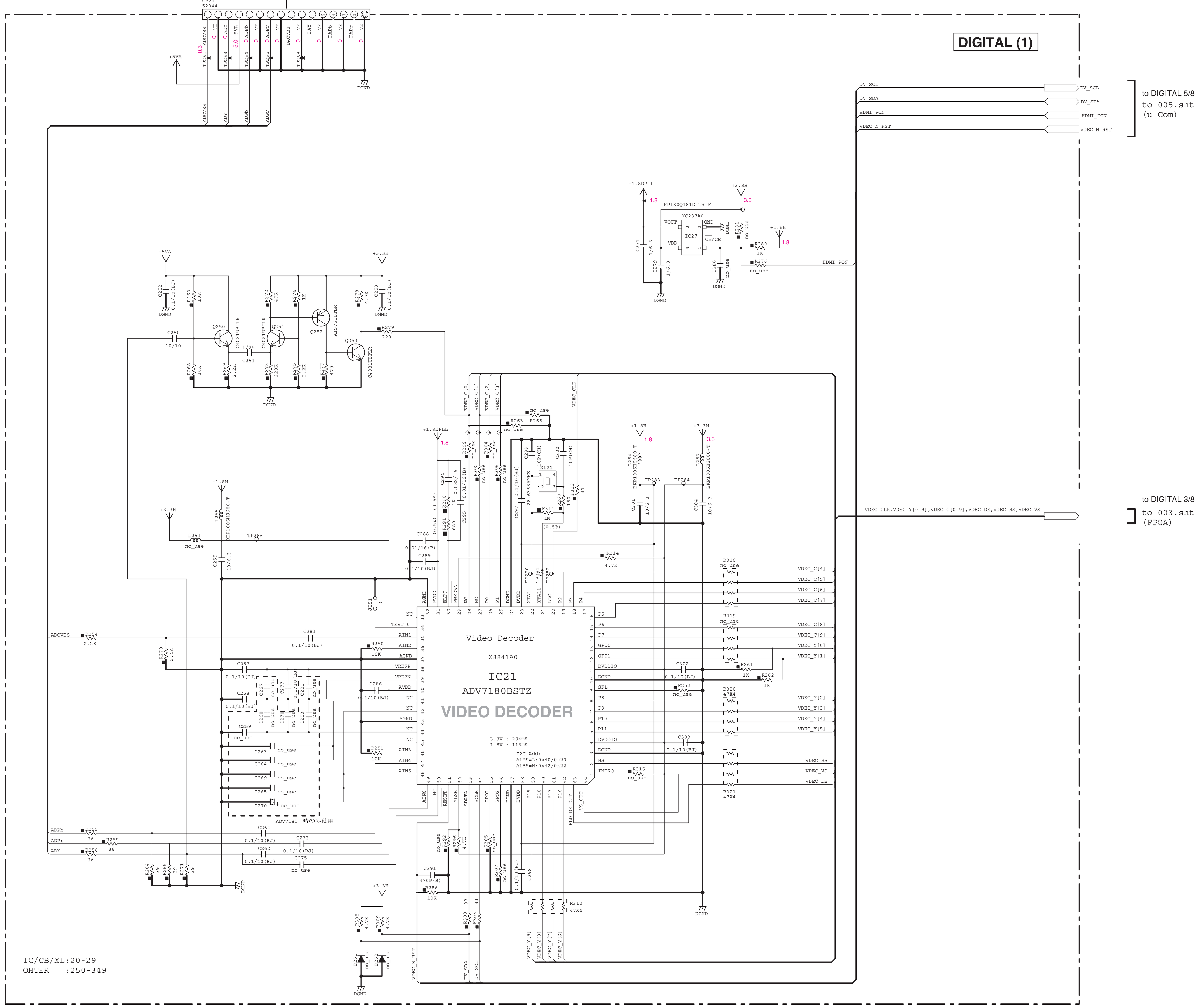
IC1, 2: SII9589-3
HDMI port processors

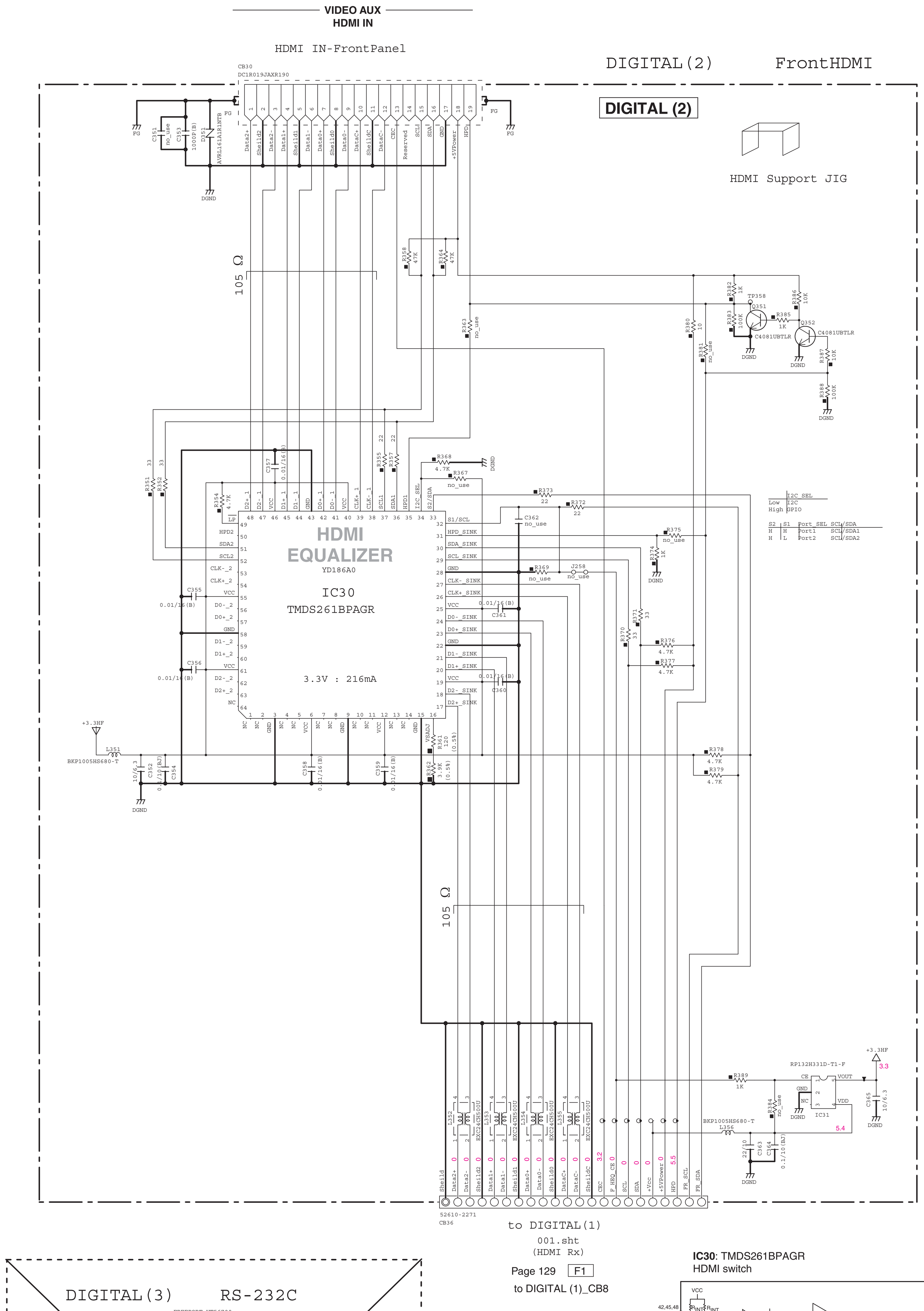


RX-V673/HTR-6065 | RX-A720

DIGITAL 2/8

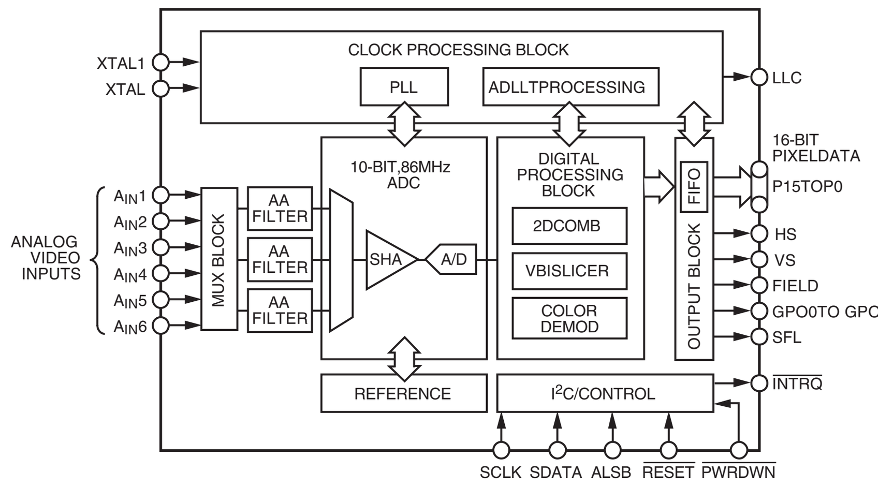
Page 143 K9 RX-V673/HTR-6065 to VIDEO (1)_CB303
Page 146 K9 RX-A720 to VIDEO (1)_CB303

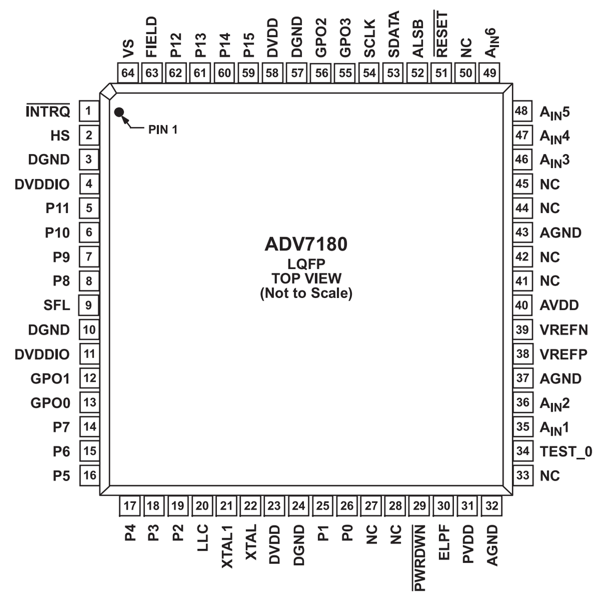




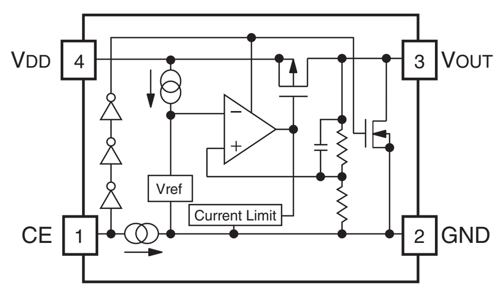
Page 129 F1 to DIGITAL (1)_CB8

IC21: ADV7180BSTZ
10-bit, 4 x oversampling SDTV video decoder



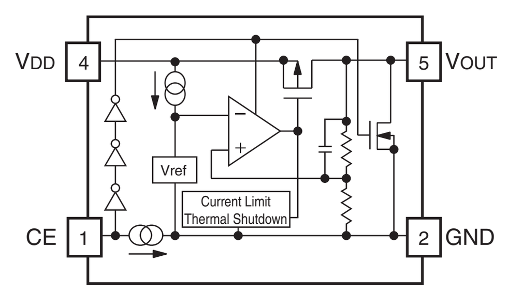


IC27: RP130Q181D-TR-F
Voltage regulator

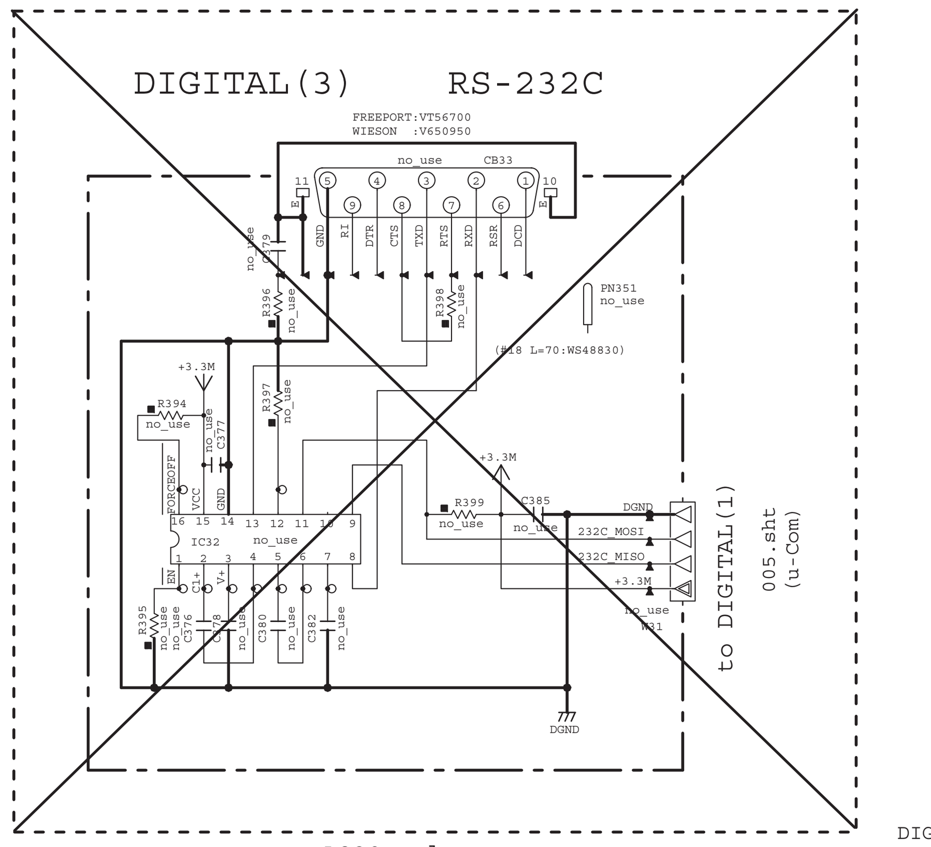


Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

IC31: RP132H331D-T1-FE
Voltage regulator

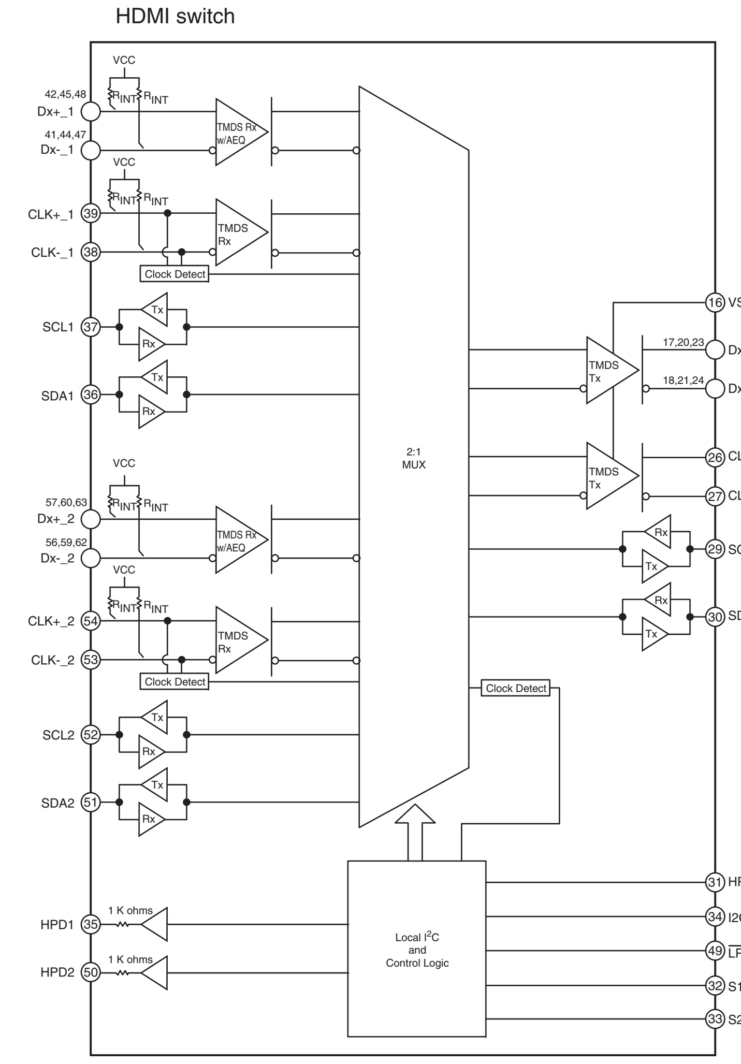


Pin No.	Symbol	Description
1	CE	Chip Enable Pin ("H" Active)
2	GND	Ground Pin
3	NC	No Connection
4	VDD	Input Pin
5	VOUT	Output Pin



A820 only

IC30: TMDS261BPAGR
HDMI switch



RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⧄	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
▤	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⦶	MICA CAPACITOR
Ⓟ	POLYPROPYLENE FILM CAPACITOR
⊜	SEMICONDUCTIVE CERAMIC CAPACITOR
Ⓢ	POLYPHENYLENE SULFIDE FILM CAPACITOR

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

DIGITAL(2),(3)
IC/CB/XL:30-39
OHTER :350-399

Sheet2:VDec/FHDMI/232C

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-V673/HTR-6065 | RX-A720

DIGITAL 3/8

to 001.sht (HDMI Rx) to DIGITAL 1/8

to 002.sht (VDec) to DIGITAL 2/8

to 005.sht (u-Com) to DIGITAL 5/8

to 005.sht (u-Com) to DIGITAL 5/8

to 006.sht (Net/USB) to DIGITAL 6/8

to 004.sht (HDMI Tx) to DIGITAL 4/8

No replacement part available.

できるだけ IC50 端子付近に配置

IC50 EP4CE15F23C6N YD917A0 FPGA

IC53 NT5SV8M16HS-6K YA56080 SDRAM

ESMT : X3745B0 M12L128168A-5TG2L
Winbond : X3584E0 W9812G6JB-6
Nanya : YA56GB0 NT5SV8M16HS-6K

IC55 RP130Q251D-TR-FE Voltage regulator

IC56 R1172N301D-TR-F Voltage regulator

IC57 RP130Q121D-TR-F Voltage regulator

IC51 TC7SH125FU Bus buffer

Sheet3:FPGA

IC/CB/XL:45-59
SW :45-59
OHTER :450-599

IC53: NT5SV8M16HS-6K
128 Mb synchronous DRAM

DIGITAL (1)

V773/A820 only

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-V673/HTR-6065 | **RX-A720**

DIGITAL 4/8

V773/A820 only

HDMI OUT2

HDMI OUT1

DIGITAL (1)

105 Ω

CI2CA:High
0x7E,76,C4

YD892A0

IC62

3.3V:5mA
1.2V:142mA

CI2CA:Low
0x7A,72,C0

HDMI TRANSMITTER

YD892A0

IC61

SII9136CTU-3

No replacement part available.

3.3V:5mA
1.2V:142mA

+5HT

TC74VHC157FT

Vcc: 2.0 - 5.5V
ViH: > 0.7*Vcc
ViL: < 0.3*Vcc

/ST SEL | I=O
L L | Y=A
L H | Y=B
H X | HiZ

BUFFER

300MHz DIGITAL Video bus lines

to 001.sht (HDMI Rx)
to DIGITAL 1/8

to 005.sht (u-Com)
to DIGITAL 5/8

to 007.sht (DSP/DIR)
to DIGITAL 7/8

to 003.sht (FPGA)
to DIGITAL 3/8

Sheet4:HDMI Tx

IC/CB/XL:60-74
OHTER :600-749

RESISTOR

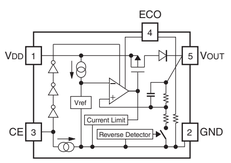
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLORD RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR
	POLYPHENYLENE SULFIDE FILM CAPACITOR

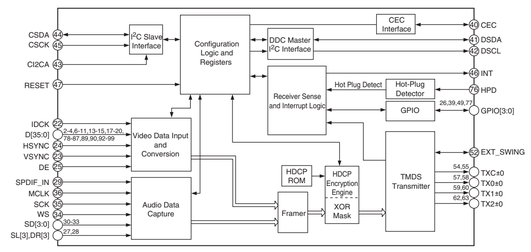
NOTICE (model)
[J]..... JAPAN
[U]..... U.S.A
[C]..... CANADA
[E]..... GENERAL
[T]..... CHINA
[K]..... KOREA
[A]..... AUSTRALIA
[B]..... BRITISH
[G]..... EUROPE
[L]..... SINGAPORE
[S]..... SOUTH EUROPE
[V]..... TAIWAN
[F]..... RUSSIAN
[P]..... LATIN AMERICA
[H]..... BRAZIL
[M]..... THAI

IC60: R1163N501B-TR-FE
CMOS-based manual mode switching LDO regulator

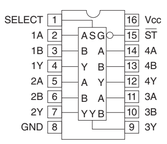


Pin No.	Symbol	Description
1	VDD	Input Pin
2	GND	Ground Pin
3	CE	Chip Enable Pin ("H" Active)
4	ECO	MODE Alternative Pin
5	VOUT	Output Pin

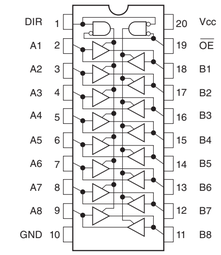
IC61: SII9136CTU-3
HDMI deep color transmitter



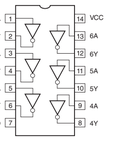
IC64: TC74VHC157FT
Quad 2-channel multiplexer



IC65: TC74LCX245FT
Low voltage octal bus transceiver
with 5-V tolerant inputs and outputs



IC66: TC74VHCU04FT
Hex inverters



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

DIGITAL 5/8

DIGITAL (1)

to DIGITAL 1/8 to 001.sht (HDMI Rx)

to DIGITAL 2/8 to 002.sht (VDec)

to DIGITAL 3/8 to 003.sht (FPGA)

to DIGITAL 4/8 to 004.sht (HDMI Tx)

to DIGITAL 6/8 to 006.sht (Net/USB)

to DIGITAL 7/8 to 007.sht (DSP/DIR)

to DIGITAL 8/8 to 008.sht (Power)

to DIGITAL 3/8 (FPGA)

DFF1

FLASH ROM

MICROPROCESSOR

No replacement part available.

EEPROM

ANALOG MUX

to DIGITAL(3) RS-232C A820 only

NSD 1stMP から未実装

to MAIN 1

THM

to VIDEO

to OPE(1)

(Writing port) 1stMP から未実装

Page 144 M5 RX-V673/HTR-6065 to VIDEO (1)_CB324

Page 147 M5 RX-A720 to VIDEO (1)_CB324

Page 142 K7 to MAIN (1)_CB156

Page 138 E1 to OPERATION (10)_CB494 (R, T, K, A, B, G, F, L, S, H models)

Page 138 E2 to OPERATION (9)_CB491 (U, C models)

Page 140 F1 to OPERATION (10)_CB494 (A model)

Page 140 F3 to OPERATION (9)_CB491 (U, C models)

Page 145 C2 RX-V673/HTR-6065 to VIDEO (4)_W3601

Page 148 C2 RX-A720 to VIDEO (4)_W3601

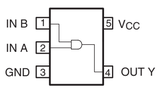
Page 137 H10 RX-V673/HTR-6065 to OPERATION (1)_CB401

Page 139 E10 RX-A720 to OPERATION (1)_CB401

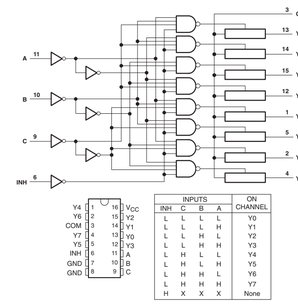
Sheet5:u-Com

IC/CB/XL:75-99
ONTER :750-999

IC75: TC7SH08FU
2-input AND gate

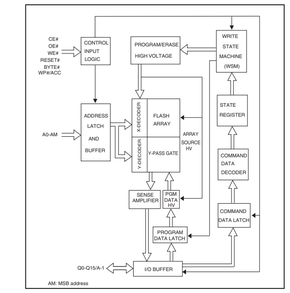


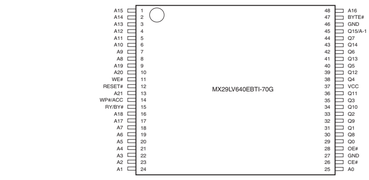
IC76, 78: SN74LV4051APWR
8-channel analog multiplexers/demultiplexers



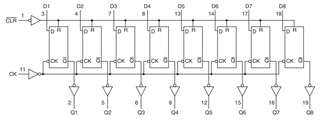
INPUTS				ON CHANNEL
INH	C	B	A	
L	L	L	L	Y0
L	L	L	H	Y1
L	L	H	L	Y2
L	L	H	H	Y3
L	H	L	L	Y4
L	H	L	H	Y5
L	H	H	L	Y6
L	H	H	H	Y7
H	X	X	X	None

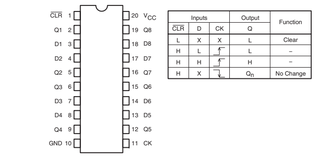
IC77: MX29LV640EBTI-70G
64 M-bit single voltage 3 V only flash memory





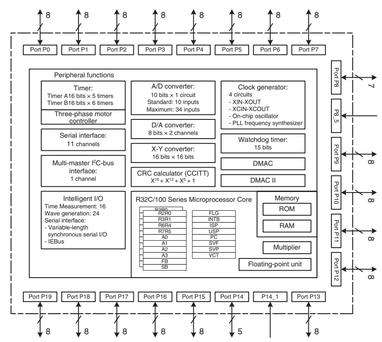
IC79, 81: TC74VHC273FT (EL,K)
Octal D-type flip-flop with clear





Inputs			Output	Function
CLR	D	CK	Q	
L	X	X	L	Clear
H	L	↑	L	–
H	H	↑	H	–
H	X	L	Q_0	No Change

IC83: R5F6416MADFE
Single chip 32-bit microprocessor



IC80: TC7SH32FU
2-input OR gate

A	B	Y
H	H	H
L	H	H
H	L	H
L	L	L

IC82: R1EX25512ATA00A
64 K word x 8-bit serial peripheral interface EEPROM

IC84, 85: RP130Q331D-TR-F
Voltage regulator

Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	V_{OUT}	Output Pin
4	V_{DD}	Input Pin

IC86: RP130Q501D-TR-F
Voltage regulator

Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	V_{OUT}	Output Pin
4	V_{DD}	Input Pin

IC87: TC7WZ32FK (TE85L, F)
Dual 2-input OR gate

IC91: TC7SH86FU
Exclusive OR gate

A	B	Y
L	L	L
L	H	H
H	L	H
H	H	L

IC92: SN74LVC1G17DCKR
Single schmitt-trigger buffer

INPUT A	OUTPUT Y
H	H
L	L

IC93: TC7WH126FU
Dual bus buffer

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-V673/HTR-6065 RX-A720

DIGITAL 6/8

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-V673/HTR-6065 | RX-A720

DIGITAL 7/8

NOTICE (model)
(J)..... JAPAN
(U,C)..... U.S.A
(C)..... CANADA
(E)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(T)..... TAIWAN
(F)..... RUSSIAN
(P)..... LATIN AMERICA
(S)..... BRAZIL
(H)..... THAI

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (F=5)
	CARBON FILM RESISTOR (F=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊟
	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⊢⊣
	CERAMIC TUBULAR CAPACITOR	
	POLYESTER FILM CAPACITOR	
	POLYSTYRENE FILM CAPACITOR	
	MICA CAPACITOR	
	POLYPROPYLENE FILM CAPACITOR	
	SEMICONDUCTIVE CERAMIC CAPACITOR	
	POLYPHENYLENE SULFIDE FILM CAPACITOR	

to DIGITAL 5/8
to 005.sht
(u-Com)

to DIGITAL 6/8
to 006.sht
(Net/USB)

to DIGITAL 8/8
to 008.sht
(Power)

DIGITAL IN

ANALOG IN

DIR

DSP

SDRAM

SERIAL FLASH

C/SW

FL/FR

SL/SR

SBL/SBR

Serial Flash Memory
8Mbit

IC923 は下記 3品併用

Part No.	Vender	Part Type
YD762A0	WINBOND	W25Q80BVSSIG
YE058A0	MXIC	MX25L8035EM2I-10G
YE005A0	EON	EN25Q80A-100HIP

IC922 は下記 3品併用

Part No.	Vender	Part Type
XZ414F0	WINBOND	W98646QJH-6
X9625B0	ESMT	M12L64164A-5TG2M
YD487A0	ZENTEL	A3V64S40ETP-G6

1stMP から未実装

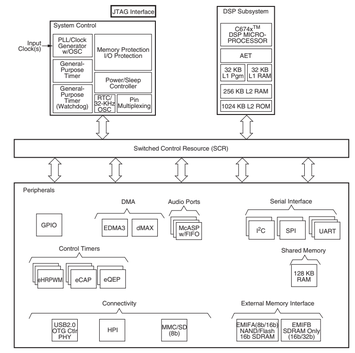
to 004.sht(HDMI Tx)
to DIGITAL 4/8

Sheet7:DSP/DIR

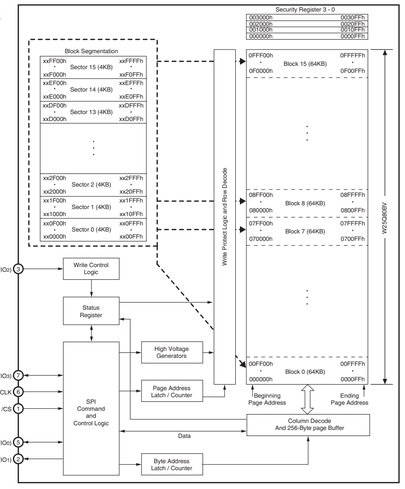
IC/CB/XL:921-939
OHTER :9201-9399

DIGITAL (1)

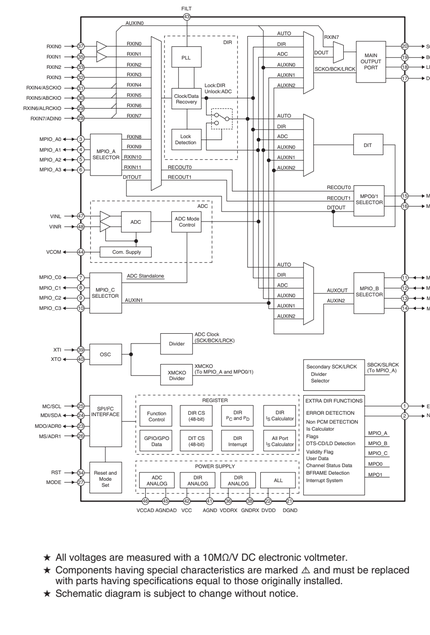
IC921: D80YK113CPTP400
Digital signal processor



IC923: W25Q80BVSSIG
8 M-bit flash memory with dual and quad SPI

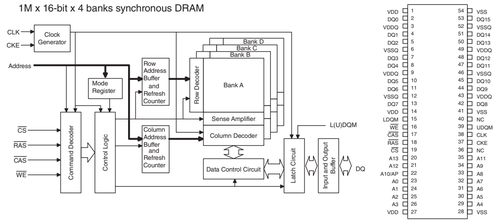


IC924: PCM9211PTR
216-kHz digital audio interface transceiver (DIX) with stereo ADC and routing



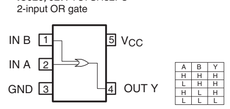
★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

IC922: M12L64164A-5TG
1M x 16-bit x 4 banks synchronous DRAM



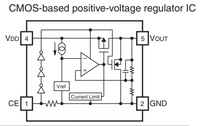
VDD	1	54	VSS
DQ0	2	53	DQ15
VDDQ	3	52	VSSQ
DQ1	4	51	DQ14
DQ2	5	50	DQ13
VSSQ	6	49	VDDQ
DQ3	7	48	DQ12
DQ4	8	47	DQ11
VDDQ	9	46	VSSQ
DQ5	10	45	DQ10
DQ6	11	44	DQ9
VSSQ	12	43	VDDQ
DQ7	13	42	DQ8
VDD	14	41	VSS
LDQM	15	40	NC
WE	16	39	UDQM
CAS	17	38	CLK
RAS	18	37	CKE
CS	19	36	NC
A13	20	35	A11
A12	21	34	A9
A10/AP	22	33	A8
A0	23	32	A7
A1	24	31	A6
A2	25	30	A5
A3	26	29	A4
VDD	27	28	VSS

IC926, 927: TC7SH32FU
2-input OR gate



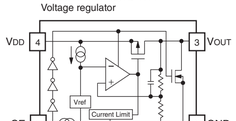
A	B	Y
L	L	L
H	L	H
L	H	H
H	H	H

IC929: R1172H121D-T1-F
CMOS-based positive-voltage regulator IC



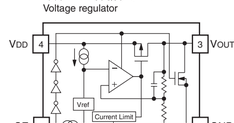
Pin No.	Symbol	Description
1	CE	Chip Enable Pin
2	GND	Ground Pin
3	NC	No Connection
4	VDD	Input Pin
5	VOUT	Output Pin of Voltage Regulator

IC930: RP130Q331D-TR-F
Voltage regulator



Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

IC931: RP130Q501D-TR-F
Voltage regulator

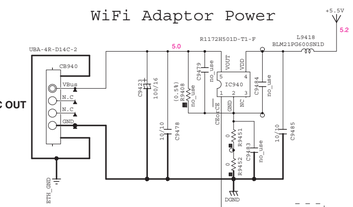


Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

RX-V673/HTR-6065 | RX-A720

DIGITAL 8/8

WiFi Adaptor Power



DIGITAL (1)

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (F=5)
	CARBON FILM RESISTOR (F=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

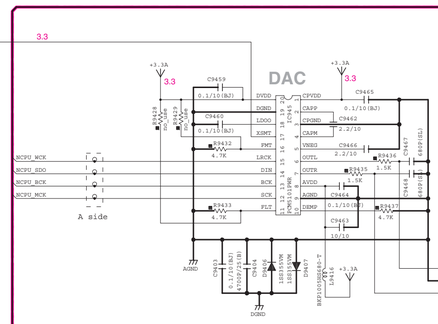
CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR
	POLYPHENYLENE SULFIDE FILM CAPACITOR

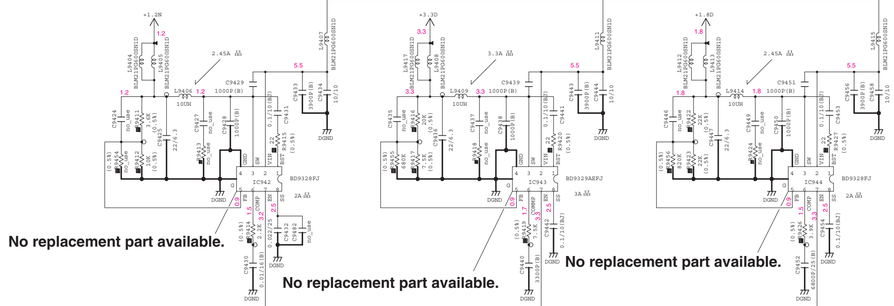
NOTICE (model)
(J) ····· JAPAN
(U) ····· U.S.A.
(C) ····· CANADA
(E) ····· GENERAL
(T) ····· CHINA
(K) ····· KOREA
(A) ····· AUSTRALIA
(B) ····· BRITISH
(E) ····· EUROPE
(L) ····· SINGAPORE
(B) ····· SOUTH EUROPE
(T) ····· TAIWAN
(R) ····· RUSSIAN
(S) ····· LATIN AMERICA
(S) ····· BRAZIL
(S) ····· THAI

FH941 FH942 FH943 FH944 FH945 no_use
#18 L=90: WS48850

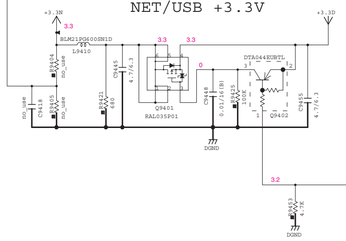
DAC



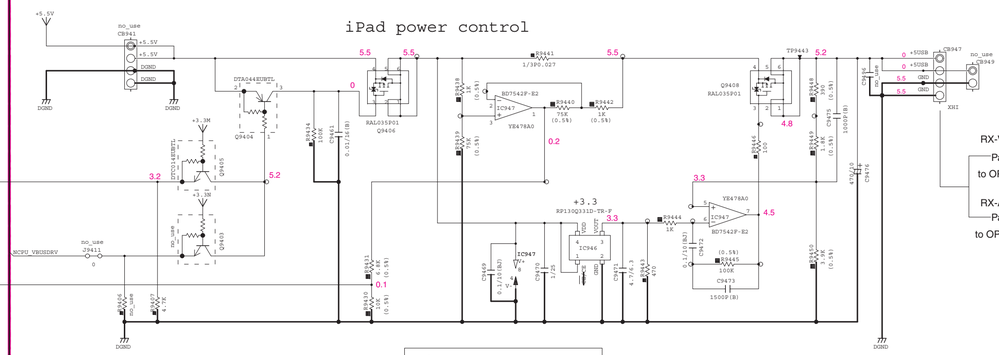
No replacement part available.



NET/USB +3.3V



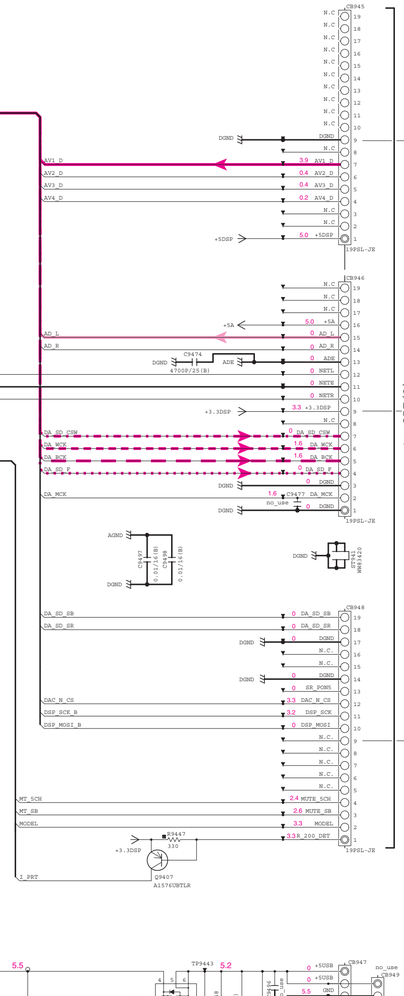
iPad power control



Sheet8:Power

IC/CB/XL:940-949
ST/PN/W :941-949
OHTER :9401-9499

to OPE(2)



RX-V673/HTR-6065
Page 138 C4
to OPERATION (2)_CB459

RX-A720
Page 140 C4
to OPERATION (2)_CB459

RX-V673/HTR-6065
Page 138 E4
to OPERATION (2)_CB460

RX-A720
Page 140 E4
to OPERATION (2)_CB460

RX-V673/HTR-6065
Page 138 I4
to OPERATION (2)_CB461

RX-A720
Page 140 I4
to OPERATION (2)_CB461

RX-V673/HTR-6065
Page 137 M7
to OPERATION (1)_W4481

RX-A720
Page 139 K9
to OPERATION (12)_W4481

to VIDEO (3)

(for service) for FA TEST

RX-V673/HTR-6065
Page 145 K9
to VIDEO (3)_CB375

RX-A720
Page 148 K9
to VIDEO (3)_CB375

RX-V673/HTR-6065
Page 145 K10
to VIDEO (3)_W3703

RX-A720
Page 148 K10
to VIDEO (3)_W3703

DIGITAL IN

to DIGITAL 7/8 (DSP/DIR) to 007.sht

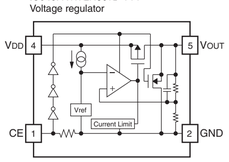
ANALOG IN

CENTER/SUBWOOFER
FRONT L
SURROUND BACK L
SURROUND L

to DIGITAL 5/8 to 005.sht (u-Com)

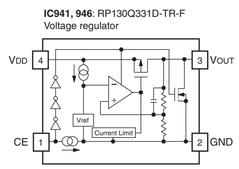
to DIGITAL 6/8 to 006.sht (Net/USB)

IC940: R1172H501D-T1-F
Voltage regulator



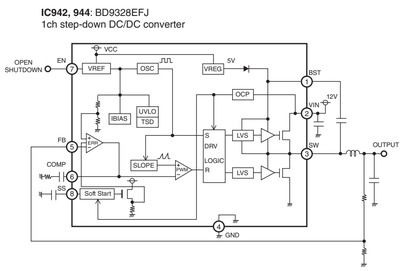
Pin No.	Symbol	Description
1	CE	Chip Enable Pin ("H" Active)
2	GND	Ground Pin
3	NC	No Connection
4	VDD	Input Pin
5	VOUT	Output Pin

IC941, 946: RP130Q331D-TR-F
Voltage regulator

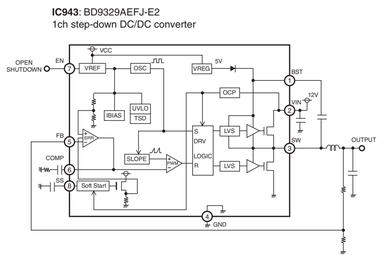


Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

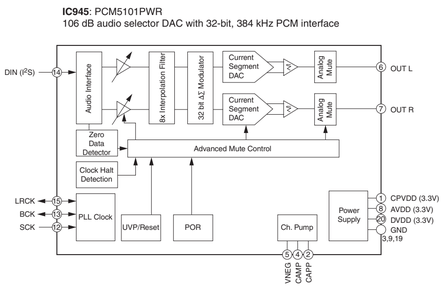
IC942, 944: BD9328EFJ
1ch step-down DC/DC converter



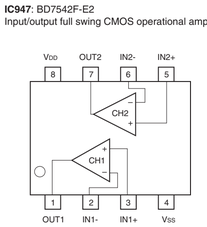
IC943: BD9329AEFJ-E2
1ch step-down DC/DC converter



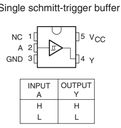
IC945: PCM5101PWR
106 dB audio selector DAC with 32-bit, 384 kHz PCM interface



IC947: BD7542F-E2
Input/output full swing CMOS operational amplifier



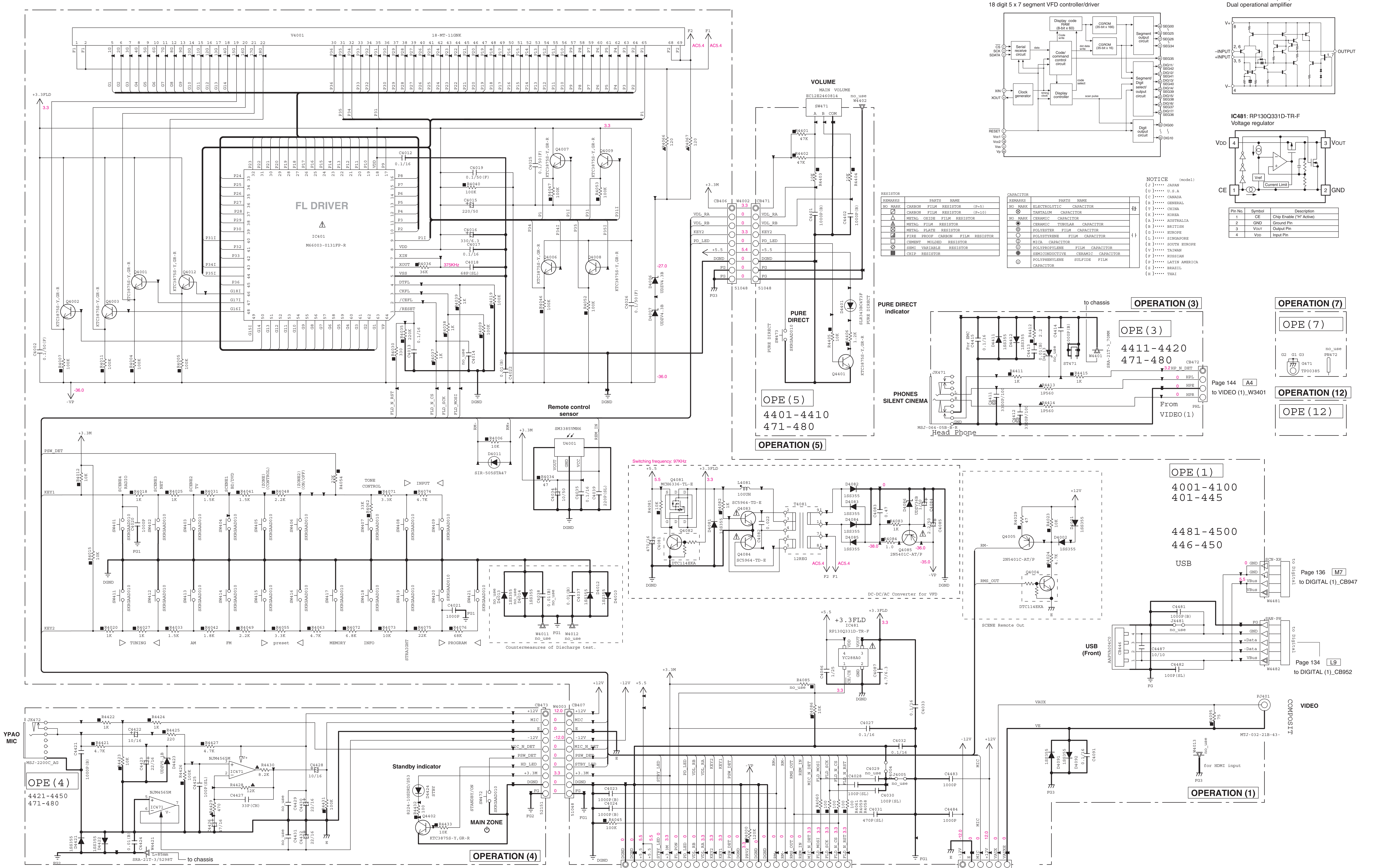
IC949: SN74LVC1G17DCKR
Single schmitt-trigger buffer



INPUT A	OUTPUT Y
H	H
L	L

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

OPERATION 1/2



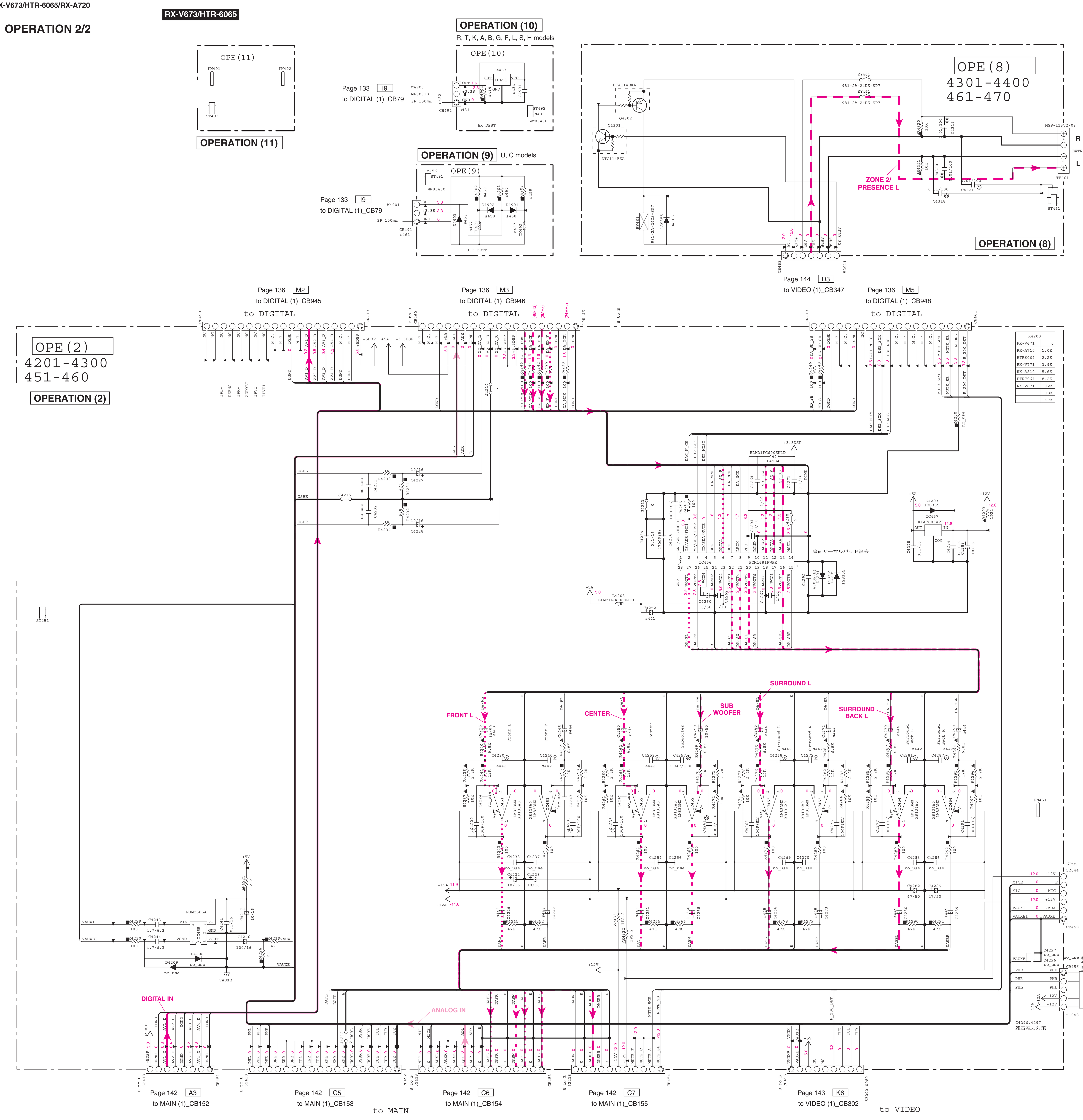
Key detection for A/D port
Key input (A/D) pull-up resistance 10 k-ohms

	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.5 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	22 kΩ	33 kΩ
Detected voltage value at 171 pin	0 – 0.15 V	0.15 – 0.42 V	0.43 – 0.70 V	0.71 – 0.97 V	0.98 – 1.24 V	1.25 – 1.53 V	1.54 – 1.84 V	1.85 – 2.22 V	2.23 – 2.62 V	2.63 – 3.04 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 75	76 – 96	97 – 119	120 – 142	143 – 163	182 – 197	198 – 209
KEY1	RADIO (SCENE4)	NET (SCENE3)	TV (SCENE2)	BD/DVD (SCENE1)	ZONE CONTROL	ZONE2	INPUT >	INPUT <	MAIN ZONE ⏻ (power)	TONE CONTROL

	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.8 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	+ 6.8 kΩ	+ 10 kΩ	+ 22 kΩ	+ 68 kΩ
Detected voltage value at 170 pin	0 – 0.15 V	0.16 – 0.42 V	0.43 – 0.70 V	0.71 – 0.99 V	1.00 – 1.27 V	1.28 – 1.56 V	1.57 – 1.86 V	1.87 – 2.14 V	2.15 – 2.39 V	2.40 – 2.65 V	2.66 – 2.91 V	2.92 – 3.17 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 77	78 – 99	100 – 121	122 – 144	145 – 166	167 – 186	187 – 205	206 – 226	227 – 246
KEY2	PURE DIRECT	TUNING >>	TUNING <<	AM	FM	PRESET >	PRESET <	MEMORY	INFO	STRAIGHT	PROGRAM >	PROGRAM <

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

OPERATION 2/2



Destination Part List

sXX	LOC	UC	RTKABGLFSH
s431	CB494	X	VI87810 51048
s432	W4903	X	MF80310 -
s433	IC491	X	YA381A0 LM19CIZ/LFT4
s434	C4901	X	US03510 0.1/16
s435	ST492	X	WW83430 -
s436	R4904	X	RD35710 10K
s441	C4252	UR06710 10/50	UU36747 47/50
s442	C4287 C4230 C4240 C4268 C4272 C4253 C4281	WY46670 820P/100	WJ60880 820P/100
s443	C4242 C4251 C4226	WK04180 10/16	UR26710 10/50
s444	C4274 C4265 C4245 C4290 C4250 C4279	UR06710 10/50	UU23710 10/16
s445	C4289 C4266 C4280 C4273	UR25710 10/35	UR26710 10/50
s456	ST491	WW83430 -	X
s457	TH492 TH491	WT69830 WC92NA103J1	X
s458	D4903 D4902 D4901	VT33290 1SS355	X
s459	R4902 R4903	RD35610 1K	X
s460	R4901	RD35710 10K	X
s461	CB491	VI87810 51048	X
s462	W4901	MF80310 -	X
s463	C4225	UR06710 10/50	UU26710 10/50

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
◪	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◩	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
▤	CHIP RESISTOR

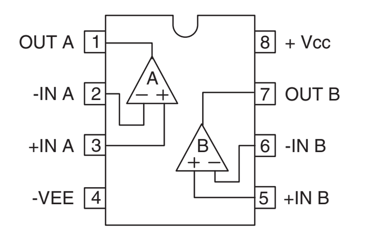
CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊣⊢ (+)
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	⊣⊢
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⦶	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
⊜	SEMICONDUCTIVE CERAMIC CAPACITOR	
Ⓢ	POLYPHENYLENE SULFIDE FILM CAPACITOR	

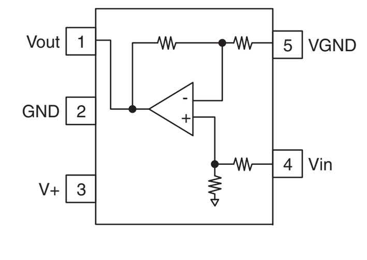
NOTICE (model)

- (J)····· JAPAN
- (U)····· U.S.A
- (C)····· CANADA
- (R)····· GENERAL
- (T)····· CHINA
- (K)····· KOREA
- (A)····· AUSTRALIA
- (B)····· BRITISH
- (G)····· EUROPE
- (L)····· SINGAPORE
- (E)····· SOUTH EUROPE
- (V)····· TAIWAN
- (F)····· RUSSIAN
- (P)····· LATIN AMERICA
- (S)····· BRAZIL
- (H)····· THAI

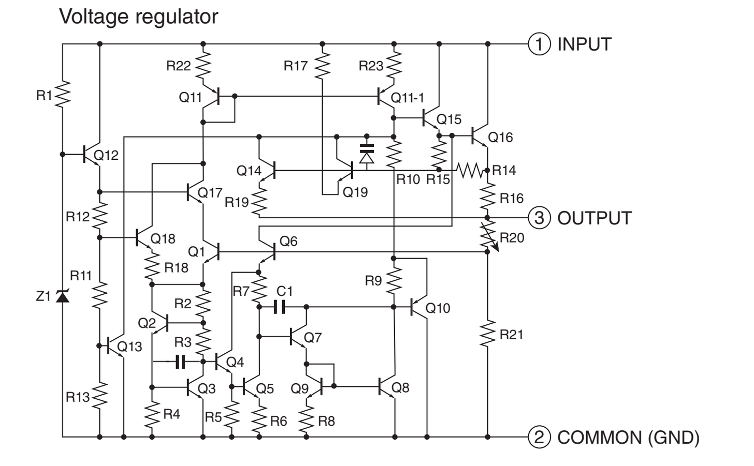
IC451–454: LM833MX
Operational amplifier



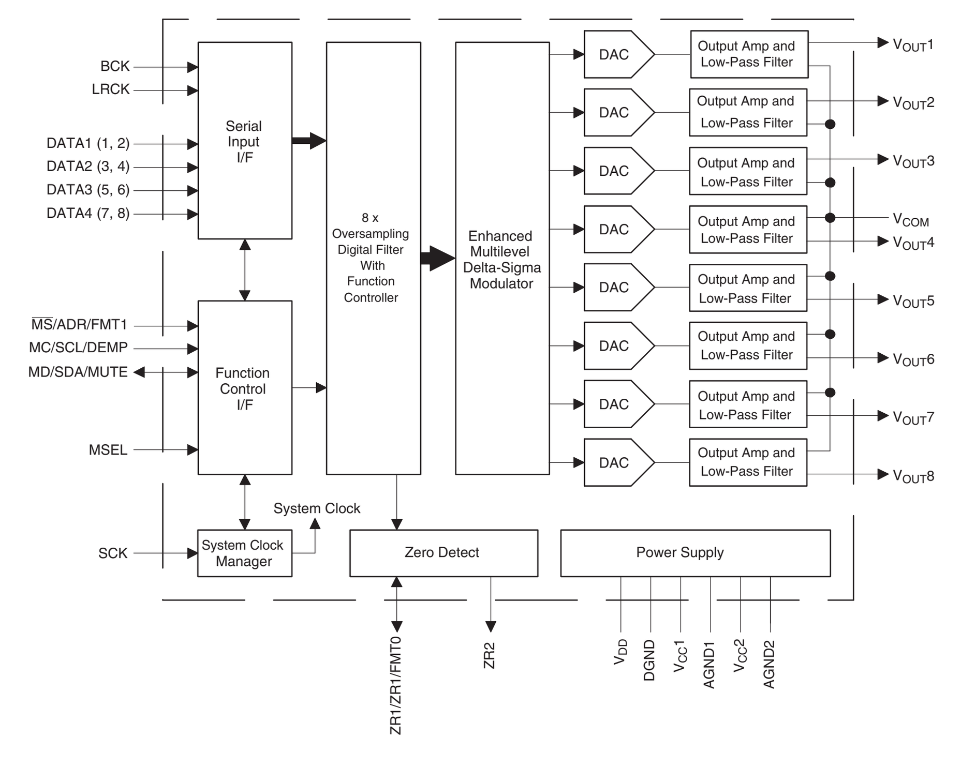
IC455: NJM2505A
Single isolation amplifier

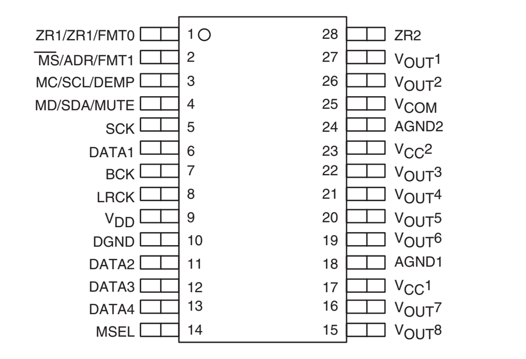


IC457: KIA7805API
Voltage regulator



IC456: PCM1681PWPR
Audio digital-to-analog converter





★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

OPERATION 1/2

OPE(1)
4001-4100
401-440

OPERATION (1)

FL DRIVER
IC401
M66003-0131FP-R

PURE DIRECT indicator

VOLUME

Switching frequency: 97KHz

DC-DC/AC Converter for VFD

OPERATION (4) 4401-4450 471-480

YPAO MIC

PHONES SILENT CINEMA

OPERATION (3) 4401-4450 471-480

OPERATION (5)

OPERATION (7)

OPERATION (6)

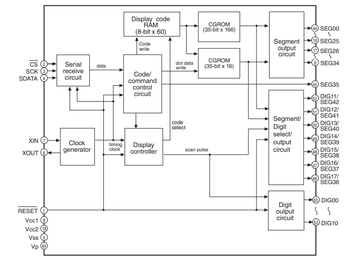
OPERATION (12) 4401-4450 471-480 4481-4500 446-450

USB (Front)

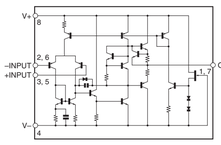
VIDEO

Remote control sensor

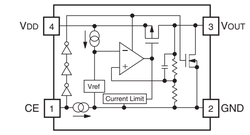
IC401: M66003-0131FP-R
18 digit 5 x 7 segment VFD controller/driver



IC471: NJM4565M (TE1)
Dual operational amplifier



IC481: RP130Q331D-TR-F
Voltage regulator



Pin No.	Symbol	Description
1	CE	Chip Enable ("H" Active)
2	GND	Ground Pin
3	VOUT	Output Pin
4	VDD	Input Pin

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	##
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
◉	CERAMIC TUBULAR CAPACITOR	##
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
ⓘ	MICA CAPACITOR	
ⓟ	POLYPROPYLENE FILM CAPACITOR	
ⓜ	SEMICONDUCTIVE CERAMIC CAPACITOR	
ⓨ	POLYPHENYLENE SULFIDE FILM CAPACITOR	

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
◪	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◩	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

Key detection for A/D port
Key input (A/D) pull-up resistance 10 k-ohms

A7	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.5 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	22 kΩ	33 kΩ
Detected voltage value at 171 pin	0 – 0.15 V	0.15 – 0.42 V	0.43 – 0.70 V	0.71 – 0.97 V	0.98 – 1.24 V	1.25 – 1.53 V	1.54 – 1.84 V	1.85 – 2.22 V	2.23 – 2.62 V	2.63 – 3.04 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 75	76 – 96	97 – 119	120 – 142	143 – 163	182 – 197	198 – 209
KEY1	RADIO (SCENE4)	NET (SCENE3)	TV (SCENE2)	BD/DVD (SCENE1)	ZONE2 CONTROL	ZONE2	–	–	MAIN ZONE ⏻ (power)	TONE CONTROL

A7	0 Ω	+ 1.0 kΩ	+ 1.0 kΩ	+ 1.5 kΩ	+ 1.8 kΩ	+ 2.2 kΩ	+ 3.3 kΩ	+ 4.7 kΩ	+ 6.8 kΩ	+ 10 kΩ	+ 22 kΩ	+ 68 kΩ
Detected voltage value at 170 pin	0 – 0.15 V	0.16 – 0.42 V	0.43 – 0.70 V	0.71 – 0.99 V	1.00 – 1.27 V	1.28 – 1.56 V	1.57 – 1.86 V	1.87 – 2.14 V	2.15 – 2.39 V	2.40 – 2.65 V	2.66 – 2.91 V	2.92 – 3.17 V
A/D value (3.3 V=255)	0 – 11	12 – 32	33 – 54	55 – 77	78 – 99	100 – 121	122 – 144	145 – 166	167 – 186	187 – 205	206 – 226	227 – 246
KEY2	PURE DIRECT	TUNING >>	TUNING <<	AM	FM	PRESET >	PRESET <	MEMORY	INFO	STRAIGHT	PROGRAM >	PROGRAM <

Page 147 B4
to VIDEO (1)_W3401

Page 133 K9
to DIGITAL (1)_CB82

Page 140 J8
to OPERATION (2)_CB458

Page 136 M7
to DIGITAL (1)_CB947

Page 134 L9
to DIGITAL (1)_CB952

★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-A720

OPERATION 2/2

OPE(11)

PN491 PN492 ST493

OPERATION (11)

OPERATION (10) A model

OPE(10)

Page 133 I9
to DIGITAL (1)_CB79

DEST A ONLY

OPERATION (9) U, C models

OPE(9)

Page 133 I9
to DIGITAL (1)_CB79

DEST U,C ONLY

OPE(8)
4301-4400
461-470

ZONE 2/
PRESENCE L

R
EXTRA SP
L

ZONE 2/
PRESENCE

OPERATION (8)

Page 147 D3
to VIDEO (1)_CB347

Destination Part List

eXX	LOC	UC	A
e431	CB494	X	V187810 51048
e432	W4903	X	MP80310 -
e433	IC491	X	YA381A0 LM19CIZ/LPT4
e434	C4901	X	US13510 0.1/16
e435	ST492	X	WW83430
e436	R4904	X	RD35710 10K
e456	ST491	WW83430	X
e457	TH492 TH491	WT69830 WCP2NA103J1	X
e458	D4903 D4902 D4901	VT33290 1SS355	X
e459	R4902 R4903	RD35610 1K	X
e460	R4901	RD35710 10K	X
e461	CB491	V187810 51048	X
e462	W4901	MP80310 -	X

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR
	POLYPHENYLENE SULFIDE FILM CAPACITOR

NOTICE (model)

J	JAPAN
U	U.S.A
C	CANADA
R	GENERAL
T	CHINA
K	KOREA
A	AUSTRALIA
B	BRITISH
G	EUROPE
L	SINGAPORE
E	SOUTH EUROPE
V	TAIWAN
F	RUSSIAN
P	LATIN AMERICA
S	BRAZIL
H	THAI

Page 136 M2
to DIGITAL (1)_CB945

Page 136 M3
to DIGITAL (1)_CB946

Page 136 M5
to DIGITAL (1)_CB948

OPE(2)
4201-4300
451-460

OPERATION (2)

R4200	
RX-V671	0
RX-A710	1.0K
HTR6064	2.2K
RX-V771	3.9K
RX-A810	5.6K
HTR7064	8.2K
RX-V871	12K
RX-A910	18K
HTR8064	27K

ST451

DIGITAL IN

ANALOG IN

SURROUND L

FRONT L

CENTER

SUB WOOFER

SURROUND BACK L

Page 139 H10
to OPERATION (1)_CB402

to OPE(1)

Page 142 A3
to MAIN (1)_CB152

Page 142 C5
to MAIN (1)_CB153

Page 142 C6
to MAIN (1)_CB154

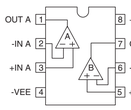
Page 142 C7
to MAIN (1)_CB155

Page 146 K6
to VIDEO (1)_CB302

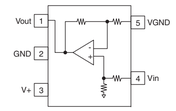
to MAIN

to VIDEO

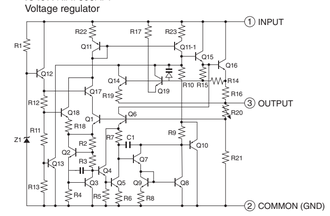
IC451–454: LM833MX
Operational amplifier



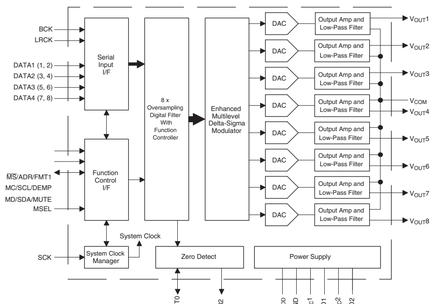
IC455: NJM2505A
Single isolation amplifier

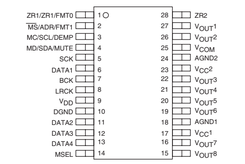


IC457: KIA7805API
Voltage regulator



IC456: PCM1681PWPR
Audio digital-to-analog converter

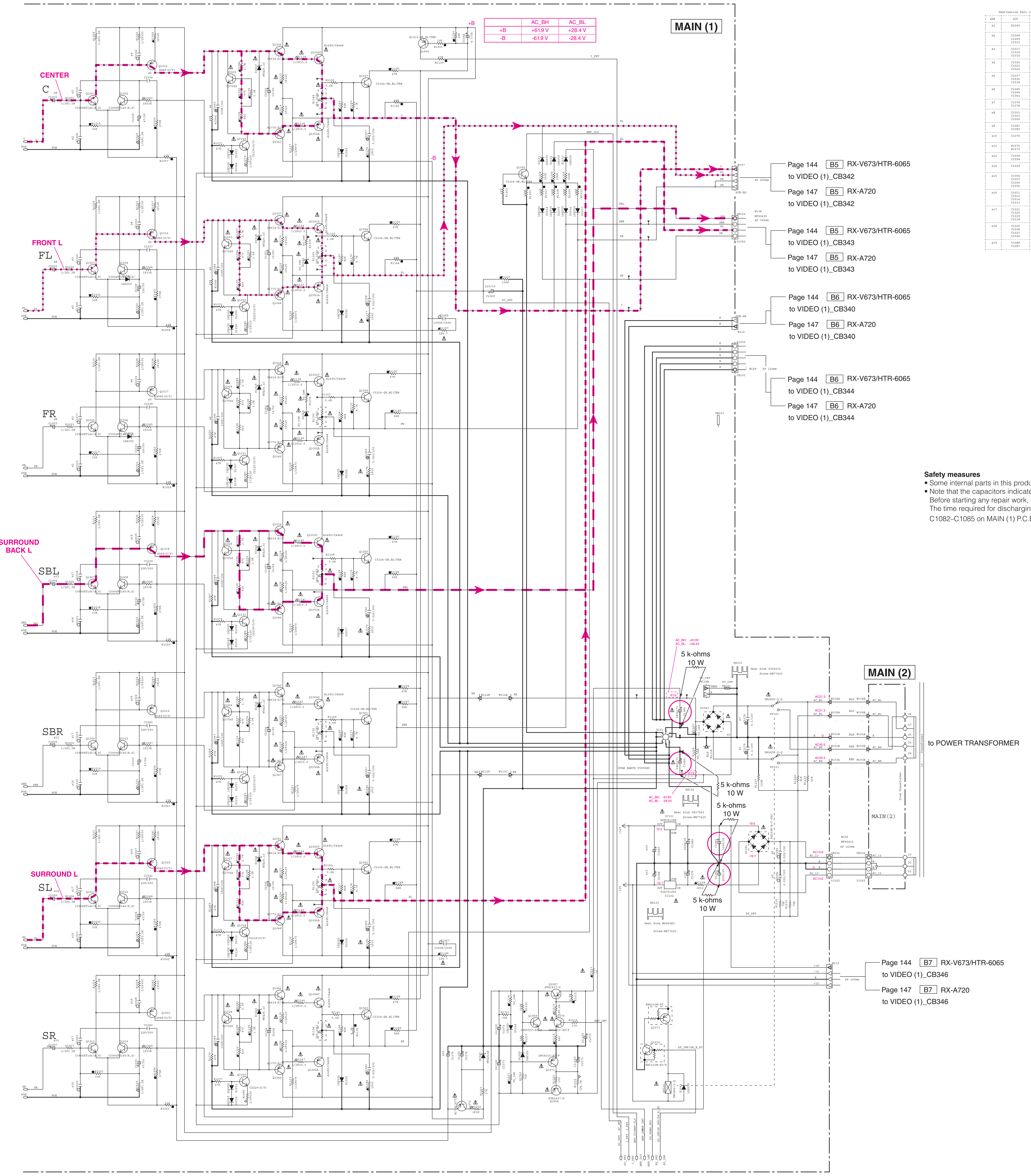




★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

MAIN 1/2

RX-V673/HTR-6065 | RX-A720



Destination Part List

sXX	LOC	UCRTKALSH	B	GF
s1	D1040	WB21270 RS603M-B-C-J80	WK61110 D6SBN20	WK61110 D6SBN20
s2	C1008 C1009 C1010	WN16420 220P/100	WE10090 220P/630	WE10090 220P/630
s3	C1017 C1016 C1015	WQ10750 120P/100	WE10060 120P/630	WE10060 120P/630
s4	C1024 C1023 C1022	WN16490 3300P/100	WE10230 3300P/100	WE10230 3300P/100
s5	C1037 C1036 C1038	WQ62760 22P/500	WE10020 22P/630	WE10020 22P/630
s6	C1045 C1044 C1043	WJ60840 330P/100	WE10110 330P/100	WE10110 330P/100
s7	C1079 C1078	WJ61140 0.1/100	WP42100 0.047/100	WP42100 0.047/100
s8	C1001 C1003 C1002	UR25710 10/35	WK04180 10/16	WK04180 10/16
s9	C1081 C1080	WN16550 0.022/100	WJ61060 0.022/100	WJ61060 0.022/100
s10	C1075	UR25710 10/35	UR06747 47/50	UR06747 47/50
s11	R1575 R1573	WA62140 1P82	WQ83570 1P82	WQ83570 1P82
s12	C1559 C1558	UR26747 47/50	UR06747 47/50	UR06747 47/50
s14	C1509	UR06747 47/50	UR23810 100/16	UR23810 100/16
s15	C1004 C1007 C1006 C1005	UR25710 10/35	UU23710 10/16	UU23710 10/16
s16	C1011 C1012 C1014 C1013	WN16420 220P/100	WJ60830 220P/100	WJ60830 220P/100
s17	C1021 C1020 C1019 C1018	WQ10750 120P/100	WW17970 120P/100	WW17970 120P/100
s18	C1025 C1028 C1027 C1026	WN16490 3300P/100	WJ60950 3300P/100	WJ60950 3300P/100
s19	C1088 C1087	UR23710 10/16	WK04180 10/16	WK04180 10/16

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
◪	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◩	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⦶	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
⊜	SEMICONDUCTIVE CERAMIC CAPACITOR	

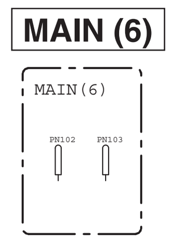
NOTICE (model)

(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

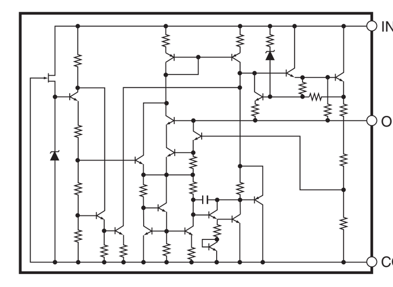
Safety measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.
  C1082–C1085 on MAIN (1) P.C.B.

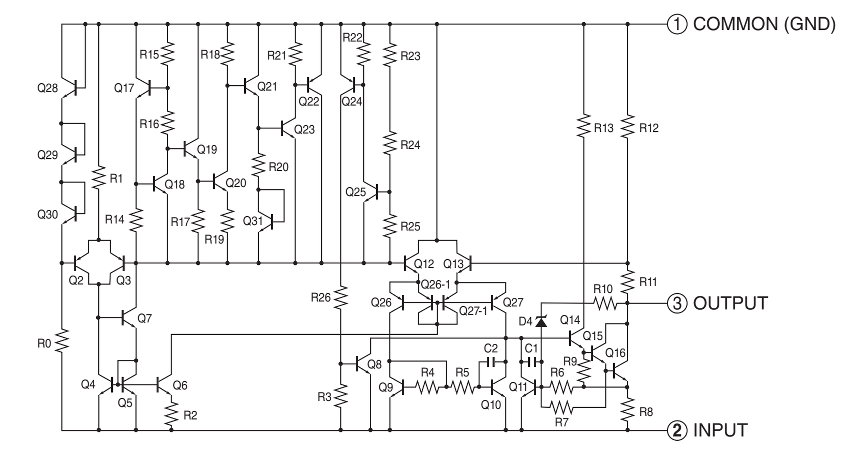
MAIN (6)



IC101: NJM7812FA
Voltage regulator



IC102: KIA7912PI
Voltage regulator



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-V673/HTR-6065 | RX-A720

MAIN 2/2

AV 1 OPTICAL | AV 2 COAXIAL | AV 3 COAXIAL | AV 4 OPTICAL (TV) | AV 5 | AV 6 | AV OUT | AUDIO 1 | AUDIO 2 | AUDIO OUT | ZONE 2 OUT | SUBWOOFER 1 2

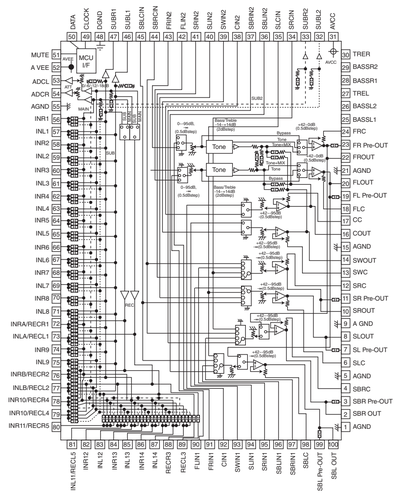
DIGITAL IN

ANALOG IN

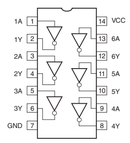
SURROUND L
SURROUND BACK L
SUB WOOFER
CENTER
FRONT L

Page 138 B10 RX-V673/HTR-6065 to OPERATION (2)_CB451
Page 140 B10 RX-A720 to OPERATION (2)_CB451
Page 138 D10 RX-V673/HTR-6065 to OPERATION (2)_CB452
Page 140 D10 RX-A720 to OPERATION (2)_CB452
Page 138 E10 RX-V673/HTR-6065 to OPERATION (2)_CB453
Page 140 E10 RX-A720 to OPERATION (2)_CB453
Page 138 F10 RX-V673/HTR-6065 to OPERATION (2)_CB454
Page 140 F10 RX-A720 to OPERATION (2)_CB454
Page 142 C7 to MAIN (1)_CB158
Page 142 H4 to MAIN (1)_CB157
Page 133 H9 to DIGITAL (1)_CB78

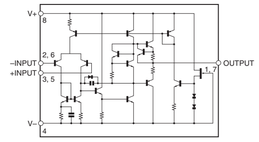
IC153: R2A15220FP
8-channel electronic volume with 11 input selector and tone control



IC152: TC74VHCU04FT
Hex inverters



IC154: NJM4565M (TE1)
Dual operational amplifier



NOTICE (model)
(J) ····· JAPAN
(U) ····· U.S.A
(C) ····· CANADA
(R) ····· GENERAL
(T) ····· CHINA
(K) ····· KOREA
(A) ····· AUSTRALIA
(B) ····· BRITISH
(G) ····· EUROPE
(L) ····· SINGAPORE
(E) ····· SOUTH EUROPE
(V) ····· TAIWAN
(F) ····· RUSSIAN
(P) ····· LATIN AMERICA
(S) ····· BRAZIL
(H) ····· THAI

RESISTOR

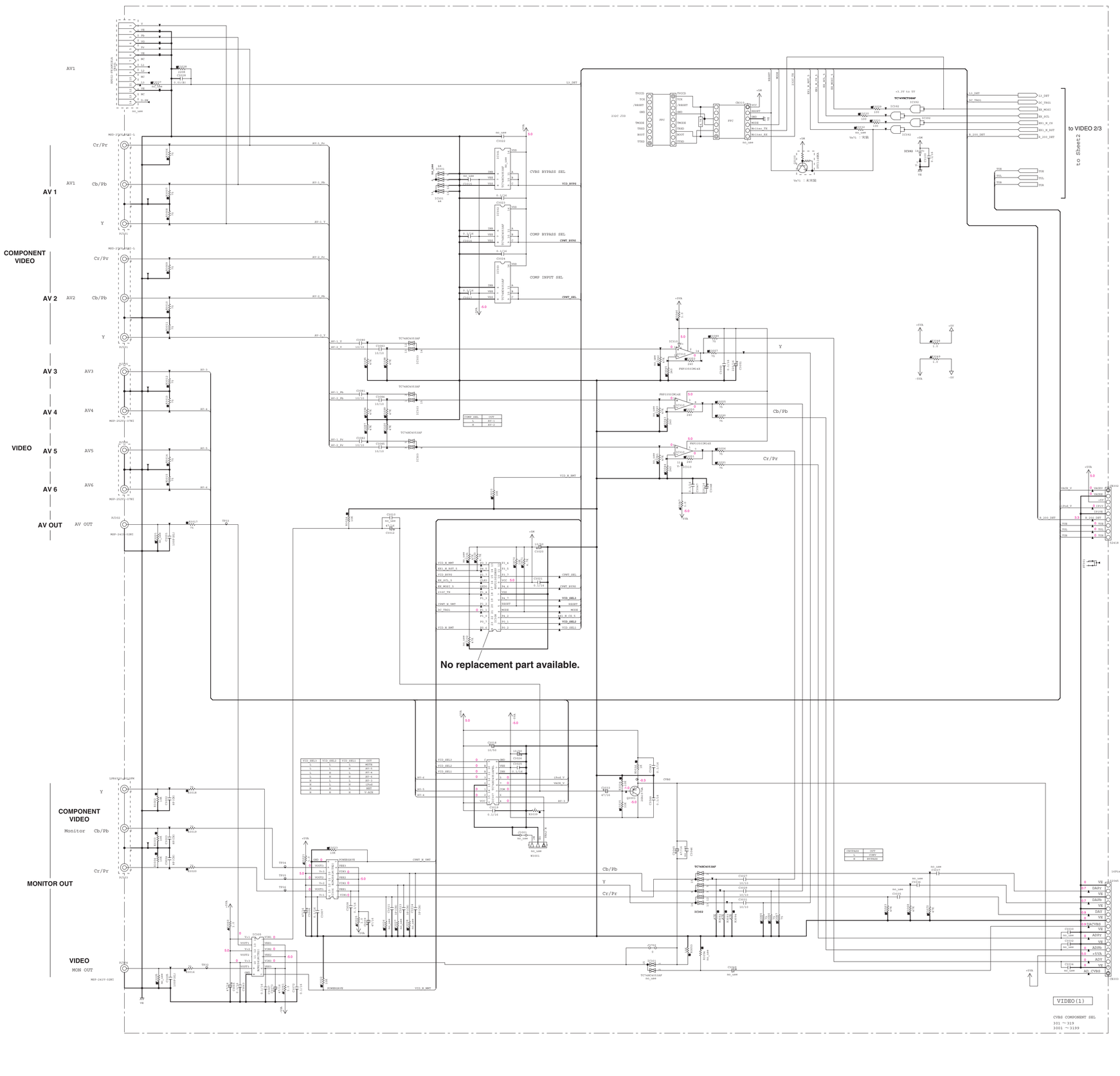
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	B
	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	F
	CERAMIC TUBULAR CAPACITOR	
	POLYESTER FILM CAPACITOR	
	POLYSTYRENE FILM CAPACITOR	
	MICA CAPACITOR	
	POLYPROPYLENE FILM CAPACITOR	
	SEMICONDUCTIVE CERAMIC CAPACITOR	

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

VIDEO 1/3

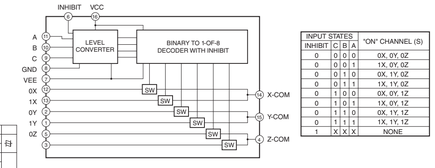


RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (5%)
	CARBON FILM RESISTOR (10%)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR

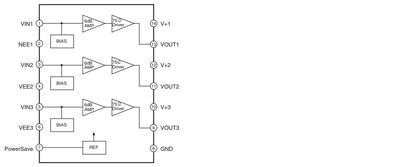
NOTICE (model)
- {J} ····· JAPAN
- {U} ····· U.S.A.
- {C} ····· CANADA
- {R} ····· GENERAL
- {T} ····· CHINA
- {K} ····· KOREA
- {A} ····· AUSTRALIA
- {B} ····· BRITISH
- {E} ····· EUROPE
- {L} ····· SINGAPORE
- {M} ····· SOUTH EUROPE
- {V} ····· TAIWAN
- {F} ····· RUSSIAN
- {P} ····· LATIN AMERICA
- {S} ····· BRAZIL
- {H} ····· THAI

IC302, 303: TC74HC4053AF
Analog multiplexer/demultiplexer

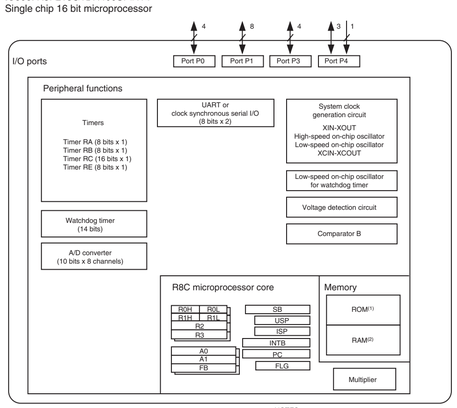


INPUT STATES				"ON" CHANNEL (S)
INHIBIT	C	B	A	
0	0	0	0	0X, 0Y, 0Z
0	0	0	1	1X, 0Y, 0Z
0	0	1	0	0X, 1Y, 0Z
0	0	1	1	1X, 1Y, 0Z
0	1	0	0	0X, 0Y, 1Z
0	1	0	1	1X, 0Y, 1Z
0	1	1	0	0X, 1Y, 1Z
0	1	1	1	1X, 1Y, 1Z
1	X	X	X	NONE

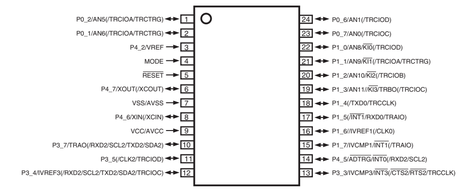
IC305, 306: NJM2581M
Video amplifier



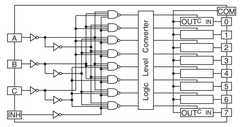
IC308: R5F213G1DN400SP#W4
Single chip 16 bit microprocessor



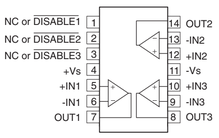
NOTES:
1. ROM size varies with MCU type.
2. RAM size varies with MCU type.



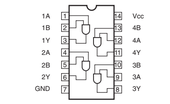
IC307: TC74HC4051AFEL
8-channel analog multiplexer/demultiplexer



IC310: FHP3350IM14X
Triple voltage feedback amplifier



IC392: TC74VHCT08AF
Quad 2-input AND gate



Page 138 H10
to OPERATION (2)_CB455

Page 130 C2
to DIGITAL (1)_CB21

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

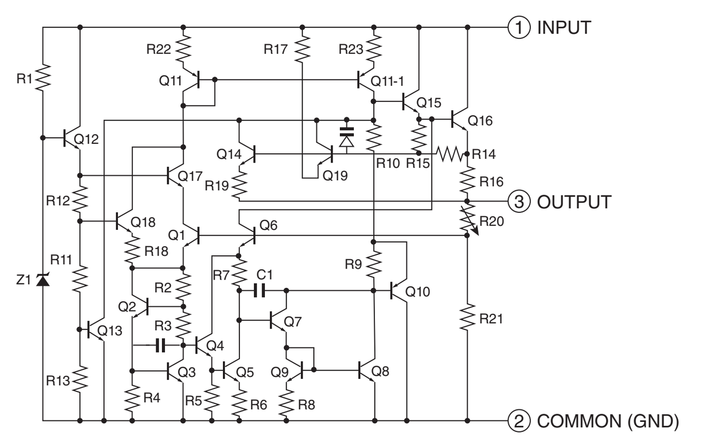
RX-V673/HTR-6065

VIDEO 2/3

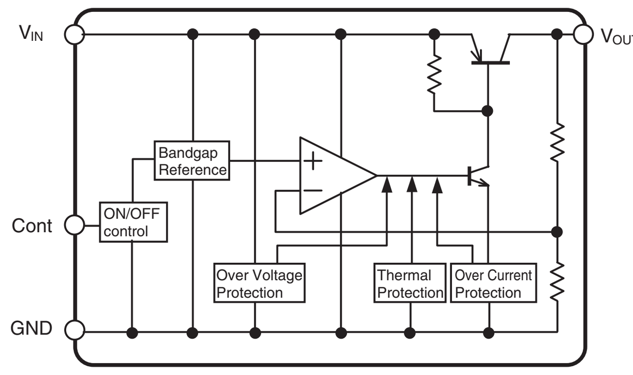
Destination Part List

sXX	LOC	U	C	RS	T	K	A	BGF	LH
s201	TE341 TE343	WW72890 MST-204V5-01-76	WW72890 MST-204V5-01-76	WW72890 MST-204V5-01-76	WW72890 MST-204V5-01-76	WW72650 MST-204V5-01-76	WW72890 MST-204V5-01-76	WW72650 MST-204V5-01-76	WW72650 MST-204V5-01-76
s202	TE342	WW72660 MST-207V7-01-76	WW72660 MST-207V7-01-76	WW72660 MST-207V7-01-76	WW72660 MST-207V7-01-76	WW72880 MST-207V7-01-76	WW72660 MST-207V7-01-76	WW72880 MST-207V7-01-76	WW72880 MST-207V7-01-76
s210	R3350	X	X	WW97250 2.2K	X	X	X	X	X
s211	D3350	X	X	VU17280 UDZS12B	X	X	X	X	X

IC333: KIA7805API
Voltage regulator



IC334: NJM2388F05
Low dropout voltage regulator with ON/OFF control



RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
◪	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲ (hatched)	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◩	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

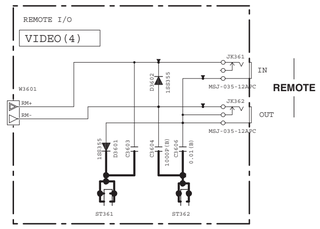
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⦶	MICA CAPACITOR
Ⓟ	POLYPROPYLENE FILM CAPACITOR
⊜	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE (model)
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

VIDEO 3/3

VIDEO (4)

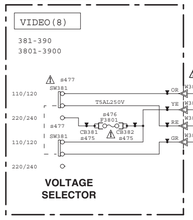


Page 133 J9
to DIGITAL (1)_CB81

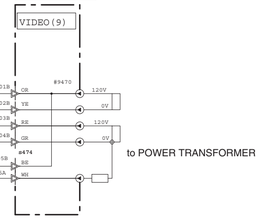
VOLTAGE SELECTOR

RS ONLY

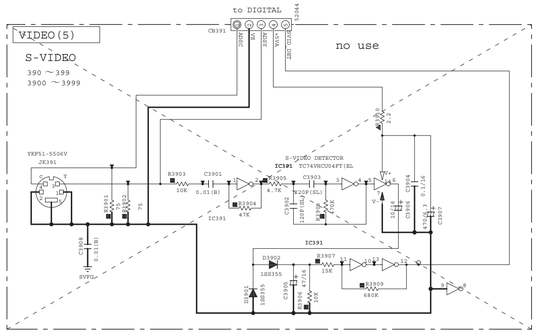
VIDEO (8) R, S models

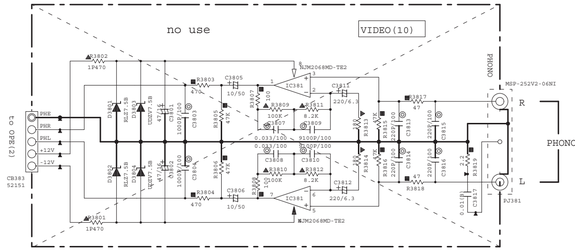


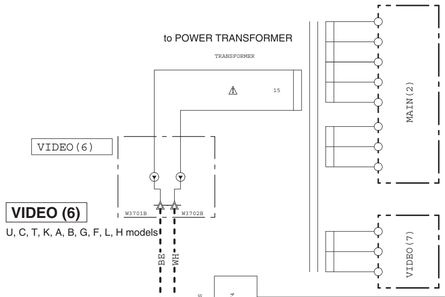
VIDEO (9) R, S models



to POWER TRANSFORMER

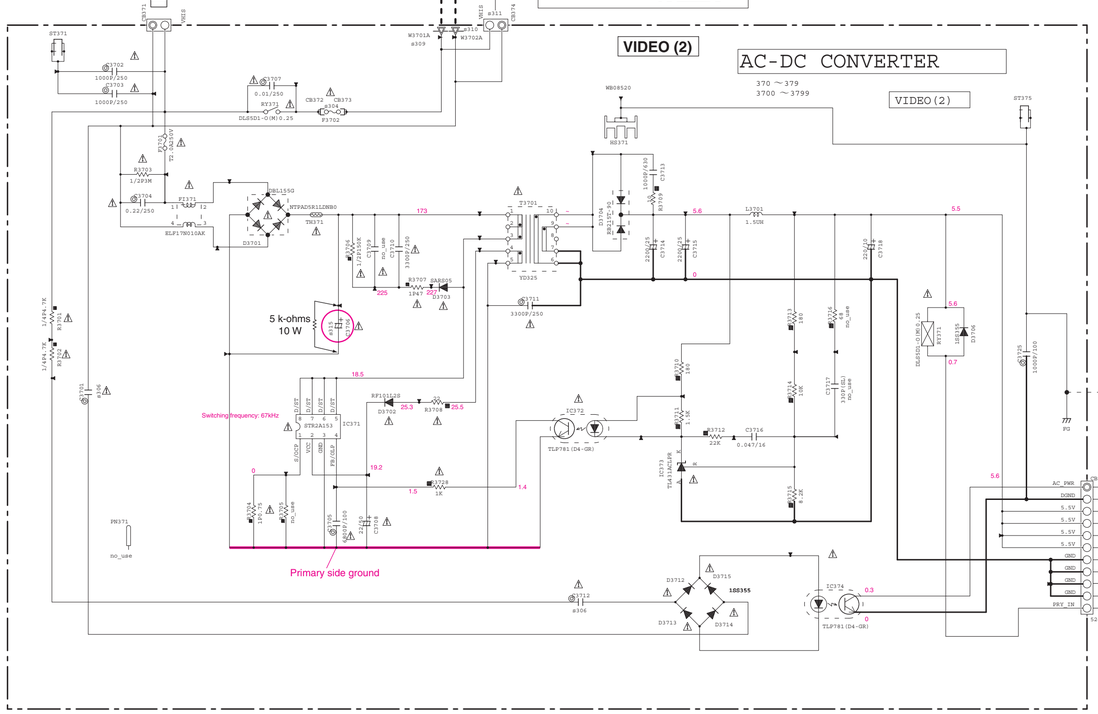




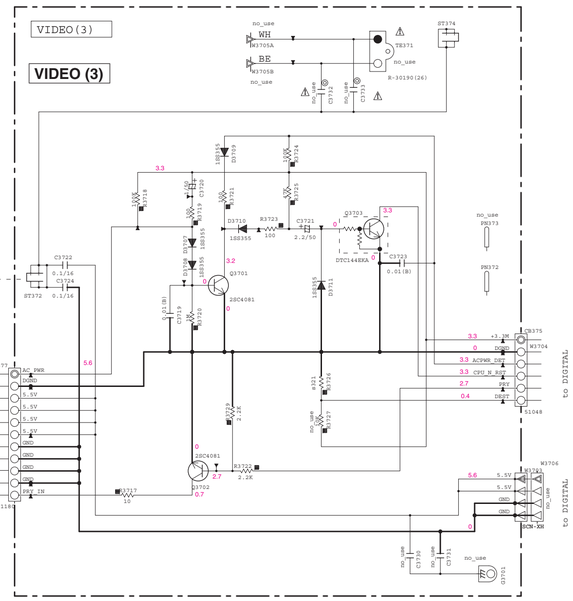


VIDEO (6)

U, C, T, K, A, B, G, F, L, H models



VIDEO (3)



Page 136 B5
to DIGITAL (1)_CB944

Page 136 B6
to DIGITAL (1)_CB942

Safety measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.
  C3706 on VIDEO (2) P.C.B.

Destination Part List

#XX	LOC	U	C	RS	T	K	A	BGP	LH
#304	F3702	W251110 8A125V	W251110 8A125V	W251110 8A125V	WM93310 T5.0AL250V	WM93310 T5.0AL250V	WM93310 T5.0AL250V	WM93310 T5.0AL250V	WM93310 T5.0AL250V
#306	C3701 C3712	WJ36120 0.047/400	WJ36120 0.047/400	WJ36180 0.022/630	WJ36180 0.022/630	WJ36180 0.022/630	WJ36180 0.022/630	WJ36180 0.022/630	WJ36180 0.022/630
#309	W3701A W3701B	M80662S	M80662S	X	M80642S	M80642S	M80662S	M80662S	M80662S
#310	W3702A W3702B	M80396S	M80396S	X	M80396S	M80396S	M80396S	M80396S	M80396S
#311	CB374	X	X	VQ87990 VH18	X	X	X	X	X
#315	C3706	WW76600 220/220	WW76600 220/220	WW76610 150/450	WQ85250 68/400	WQ85250 68/400	WQ85250 68/400	WQ85250 68/400	WQ85250 68/400
#321	R3726	RD35612 1.2K	RD35627 2.7K	RD35647 4.7K	RD35668 6.8K	RD35710 10K	RD35715 15K	RD35747 47K	RD35810 100K
#470	W3801A W3801B	X	X	M80302S	X	X	X	X	X
#471	W3802A W3802B	X	X	M80402S	X	X	X	X	X
#472	W3803A W3803B	X	X	M80202S	X	X	X	X	X
#473	W3804A W3804B	X	X	M80802S	X	X	X	X	X
#474	W3805B W3805A	X	X	WA76540 VH-5298T	X	X	X	X	X
#475	CB382 CB381	X	X	WN10300 TP00351-31	X	X	X	X	X
#476	F3801	X	X	X800078 T5AL250V	X	X	X	X	X
#477	SW381	X	X	WV38290 SL14	X	X	X	X	X

IC371: STR2A153
Switching regulator

IC373: TL431ACLPR
Adjustable precision shunt regulators

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR

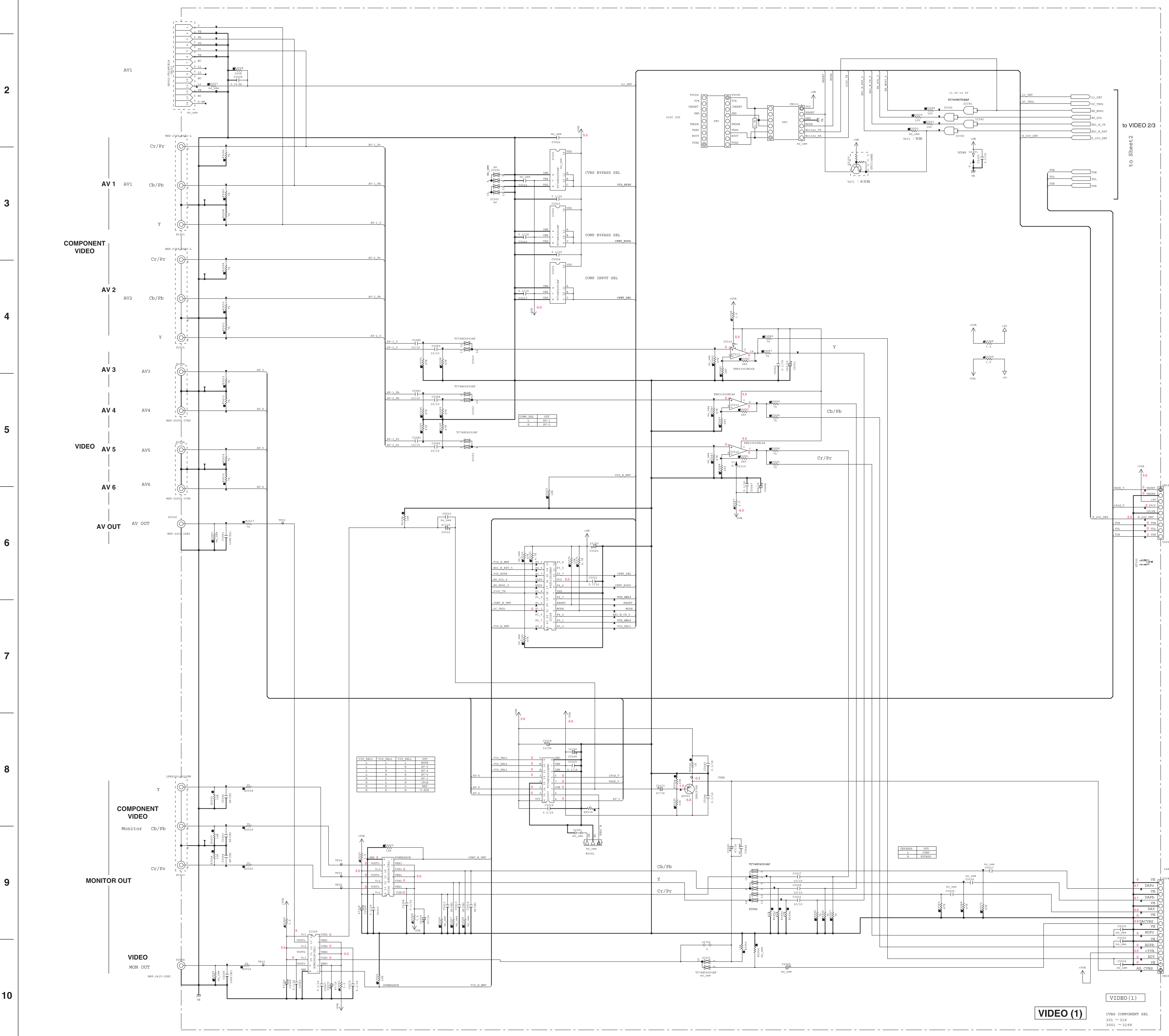
NOTICE (model)

- [J] ····· JAPAN
- [U] ····· U.S.A
- [C] ····· CANADA
- [E] ····· GENERAL
- [T] ····· CHINA
- [K] ····· KOREA
- [A] ····· AUSTRALIA
- [B] ····· BRITISH
- [G] ····· EUROPE
- [L] ····· SINGAPORE
- [S] ····· SOUTH EUROPE
- [V] ····· TAIWAN
- [F] ····· RUSSIAN
- [P] ····· LATIN AMERICA
- [H] ····· BRAZIL
- [N] ····· THAI

★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

RX-A720

VIDEO 1/3



RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊠	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
▤	CHIP RESISTOR

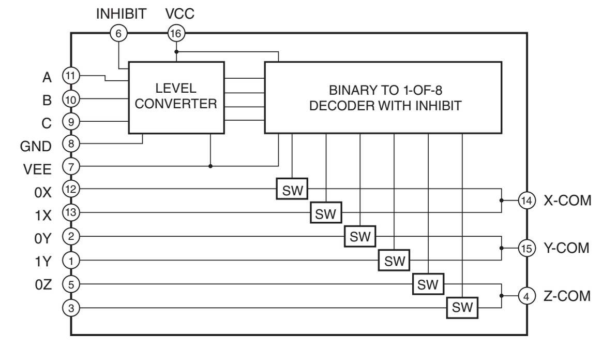
CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
◉	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⦶	MICA CAPACITOR
Ⓟ	POLYPROPYLENE FILM CAPACITOR
⊜	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE (model)

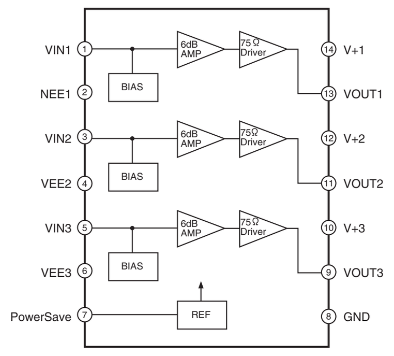
(J)····· JAPAN
(U)····· U.S.A
(C)····· CANADA
(R)····· GENERAL
(T)····· CHINA
(K)····· KOREA
(A)····· AUSTRALIA
(B)····· BRITISH
(G)····· EUROPE
(L)····· SINGAPORE
(E)····· SOUTH EUROPE
(V)····· TAIWAN
(F)····· RUSSIAN
(P)····· LATIN AMERICA
(S)····· BRAZIL
(H)····· THAI

IC302, 303: TC74HC4053AF
Analog multiplexer/demultiplexer

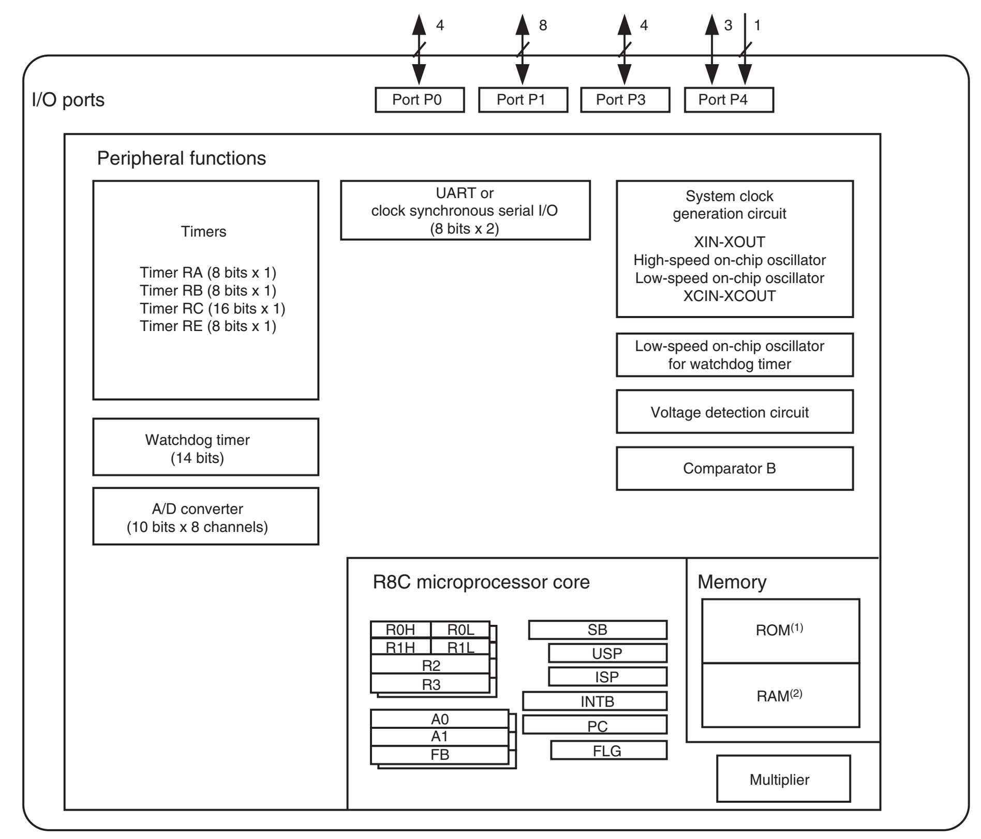


INPUT STATES				"ON" CHANNEL (S)
INHIBIT	C	B	A	
0	0	0	0	0X, 0Y, 0Z
0	0	0	1	1X, 0Y, 0Z
0	0	1	0	0X, 1Y, 0Z
0	0	1	1	1X, 1Y, 0Z
0	1	0	0	0X, 0Y, 1Z
0	1	0	1	1X, 0Y, 1Z
0	1	1	0	0X, 1Y, 1Z
0	1	1	1	1X, 1Y, 1Z
1	X	X	X	NONE

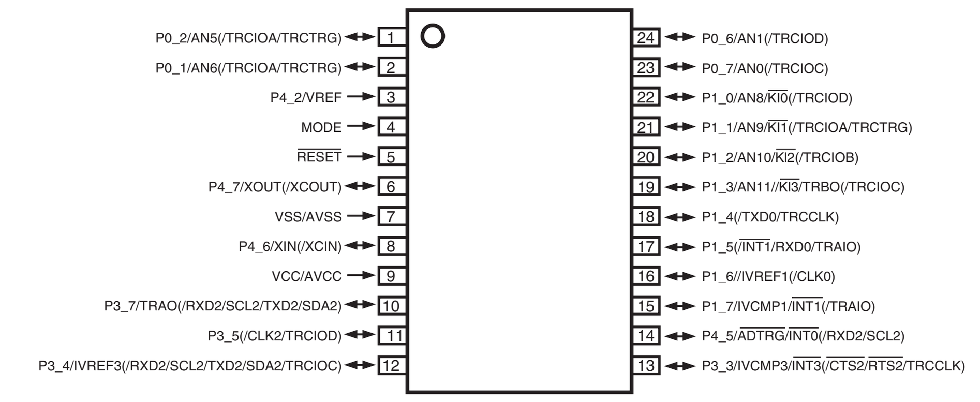
IC305, 306: NJM2581M
Video amplifier



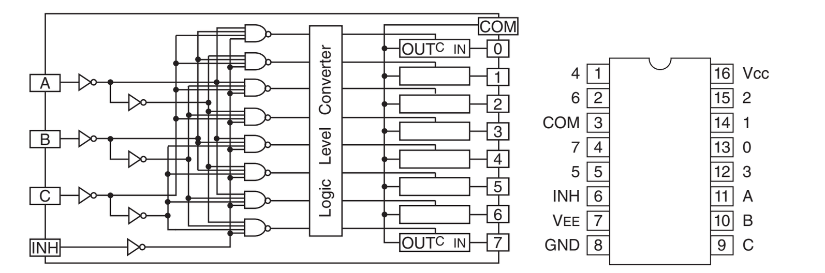
IC308: R5F213G1DN400SP#W4
Single chip 16 bit microprocessor



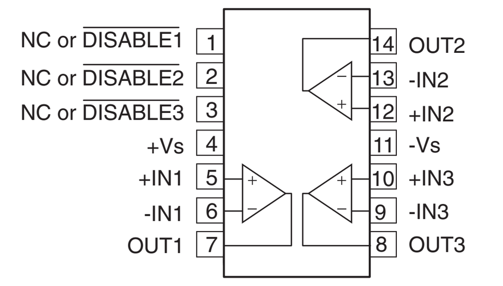
NOTES:
1. ROM size varies with MCU type.
2. RAM size varies with MCU type.



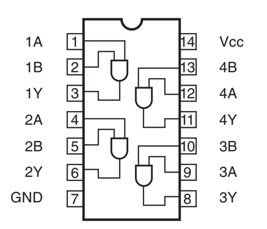
IC307: TC74HC4051AFEL
8-channel analog multiplexer/demultiplexer



IC310: FHP3350IM14X
Triple voltage feedback amplifier



IC392: TC74VHCT08AF
Quad 2-input AND gate



★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

VIDEO 2/3

VIDEO (1)

TRIGER & TUNER
320 ～ 329
3200 ～ 3299

VIDEO(1)

NOTICE (model)
(J)..... JAPAN
(U)..... U.S.A
(C)..... CANADA
(E)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(S)..... SOUTH EUROPE
(V)..... TAIWAN
(P)..... RUSSIAN
(P)..... LATIN AMERICA
(H)..... BRAZIL
(H)..... THAI

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
	CARBON FILM RESISTOR (P=10)
	METAL OXIDE FILM RESISTOR
	METAL FILM RESISTOR
	METAL PLATE RESISTOR
	FIRE PROOF CARBON FILM RESISTOR
	CEMENT MOLDED RESISTOR
	SEMI VARIABLE RESISTOR
	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
	CERAMIC TUBULAR CAPACITOR
	POLYESTER FILM CAPACITOR
	POLYSTYRENE FILM CAPACITOR
	MICA CAPACITOR
	POLYPROPYLENE FILM CAPACITOR
	SEMICONDUCTIVE CERAMIC CAPACITOR

Page 140 H3
to OPERATION (8)_CB463
to OPE(8)

Page 139 D10
to OPERATION (3)_CB471
to OPE(1)

Page 141 G3
to MAIN (1)_W107
to MAIN

Page 141 G3
to MAIN (1)_CB104
to MAIN

Page 141 G4
to MAIN (1)_W116
to MAIN

Page 141 G4
to MAIN (1)_CB103
to MAIN

Page 141 H9
to MAIN (1)_W110
to MAIN

SPEAKER RELAY
340 ～ 349
3400 ～ 3499

FRONT L/R
CENTER
SURROUND L/R
SURROUND BACK L/R / BI-AMP L/R
SPEAKERS

to Sheet1
to VIDEO 1/3

CONTROL OUT
+12V MAX 100mA
TRIGGER OUT

to AM/FM TUNER
[Tuner]
to TUNER PACK
to HD RADIO

Page 133 E9
to DIGITAL (1)_CB76
to DIGITAL

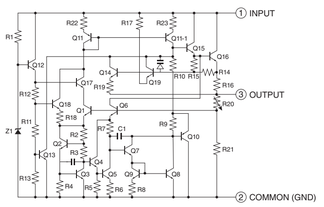
no use

to POWER TRANSFORMER
VIDEO (7)
From Transformer

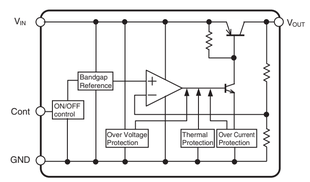
POWER SUPLY
330 ～ 339
3300 ～ 3399

W3302
MP90330

IC333: KIA7805API
Voltage regulator



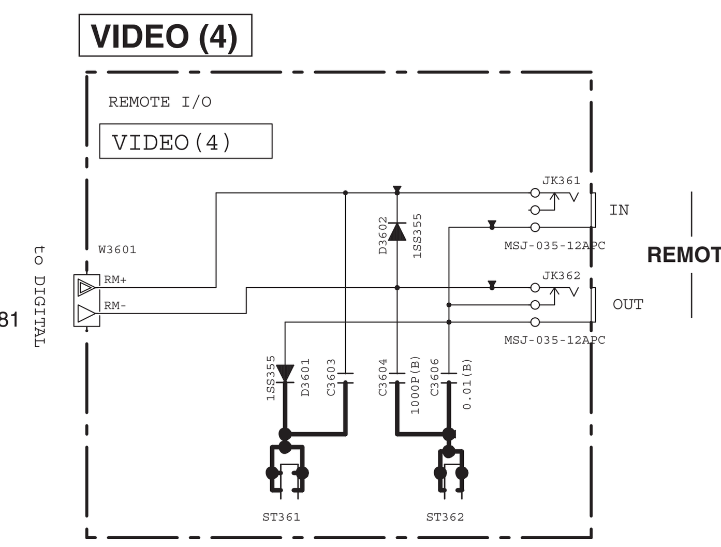
IC334: NJM2388F05
Low dropout voltage regulator with ON/OFF control



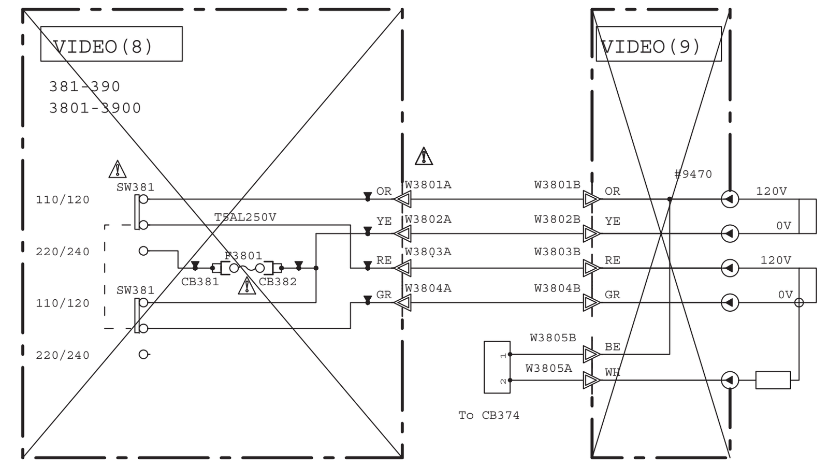
★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

VIDEO 3/3

RX-A720

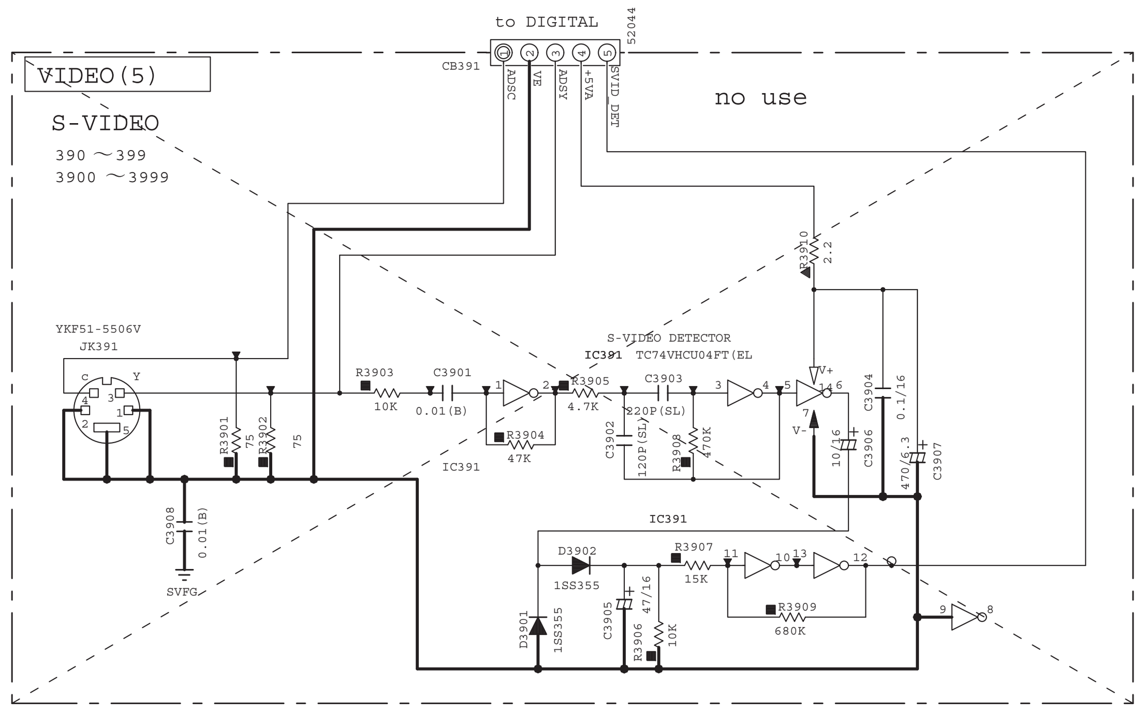


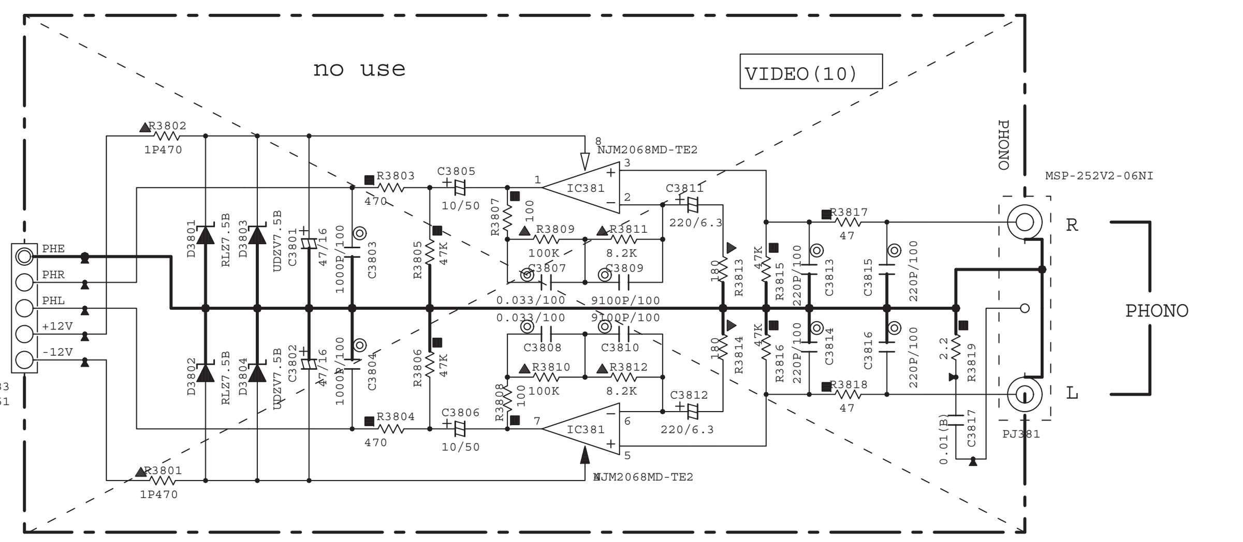
no use
VOLTAGE SELECTOR
R ONLY



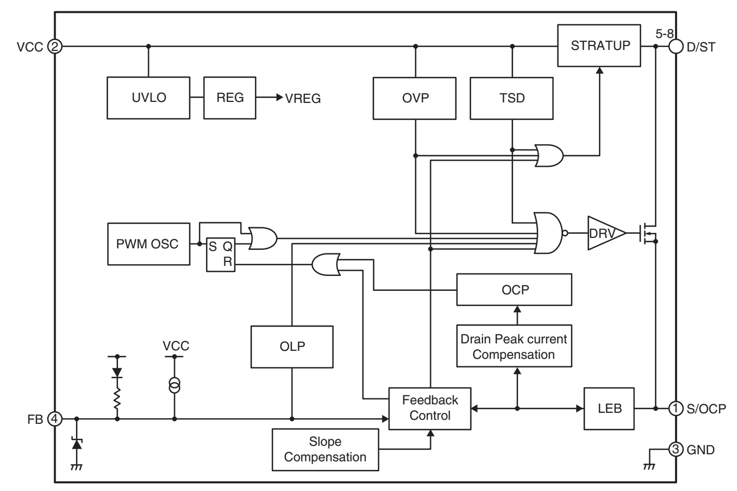
Destination Part List

sXX	LOC	U	C	A
s304	F3702	WQ21110 8A125V	WQ21110 8A125V	WM93310 T5.0AL250V
s306	C3712 C3701	WJ36120 0.047/400	WJ36120 0.047/400	WJ36180 0.022/630
s315	C3706	WW76600 220/220	WW76600 220/220	WQ85250 68/400
s321	R3726	RD35612 1.2K	RD35627 2.7K	RD35715 15K

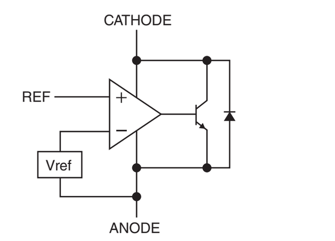


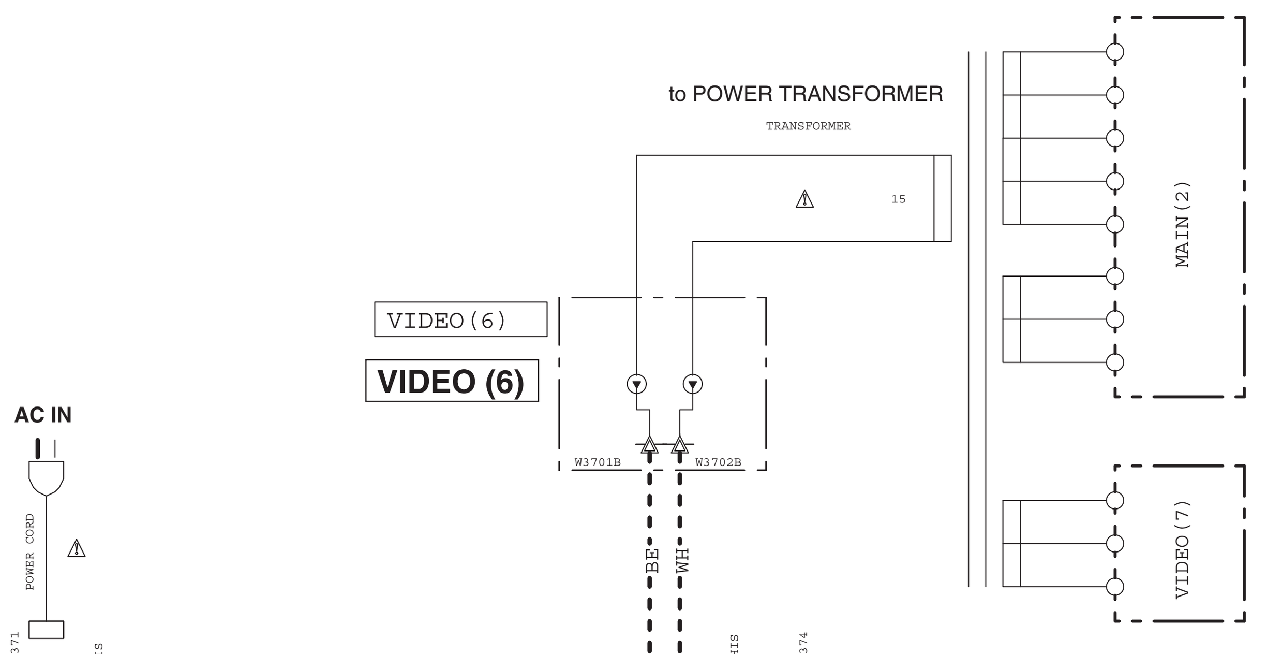


IC371: STR2A153
Switching regulator



IC373: TL431ACLPR
Adjustable precision shunt regulators

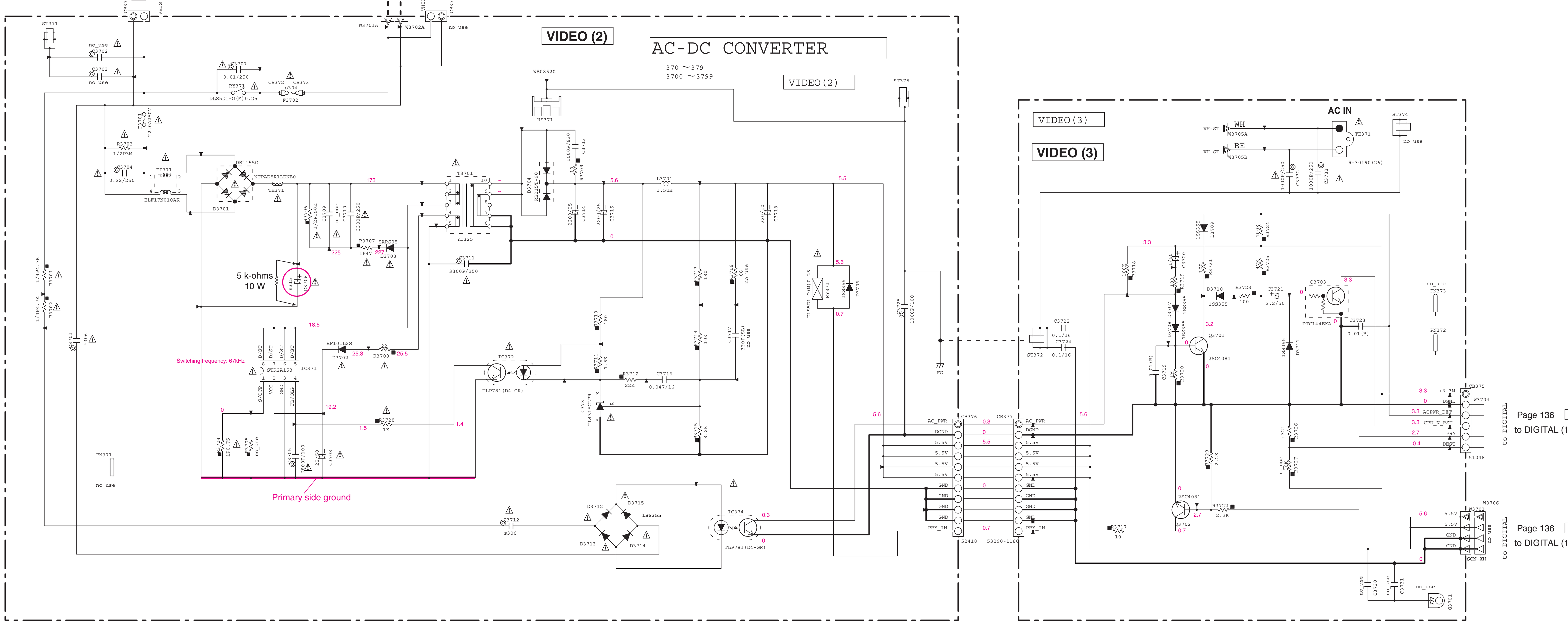




Safety measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- Note that the capacitors indicated below are dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, connect a discharging resistor (5 k-ohms/10 W) to the terminals of each capacitor indicated below to discharge electricity. The time required for discharging is about 30 seconds per each.

  C3706 on VIDEO (2) P.C.B.



RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
◪	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◩	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	(electrolytic symbol)
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	(capacitor symbol)
◉	CERAMIC TUBULAR CAPACITOR	
◎	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⦶	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
◍	SEMICONDUCTIVE CERAMIC CAPACITOR	

NOTICE (model)

(J)······ JAPAN
(U)······ U.S.A
(C)······ CANADA
(R)······ GENERAL
(T)······ CHINA
(K)······ KOREA
(A)······ AUSTRALIA
(B)······ BRITISH
(G)······ EUROPE
(L)······ SINGAPORE
(E)······ SOUTH EUROPE
(V)······ TAIWAN
(F)······ RUSSIAN
(P)······ LATIN AMERICA
(S)······ BRAZIL
(H)······ THAI

★ Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

■ REPLACEMENT PARTS LIST

● ELECTRICAL COMPONENT PARTS

WARNING

- Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equal to those originally installed.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

C.A.EL.CHP	: CHIP ALUMI.ELECTROLYTIC CAP
C.CE	: CERAMIC CAP
C.CE.ARRAY	: CERAMIC CAP ARRAY
C.CE.CHP	: CHIP CERAMIC CAP
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP
C.CE.TUBLR	: CERAMIC TUBULAR CAP
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP
C.EL	: ELECTROLYTIC CAP
C.EL.BP	: BIPOLAR ELECTROLYTIC CAP
C.EL.CHP	: CHIP ELECTROLYTIC CAP
C.MICA	: MICA CAP
C.ML.FLM	: MULTILAYER FILM CAP
C.MP	: METALLIZED POLYESTER FILM CAP
C.MYLAR	: MYLAR FILM CAP
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP
C.NIOB.OXD	: NIOBIUM OXIDE CAP
C.PAPER	: PAPER CAPACITOR
C.PLS	: POLYSTYRENE FILM CAP
C.POL	: POLYESTER FILM CAP
C.PP	: POLYPROPYLENE FILM CAP
C.PP.CHP	: CHIP POLYPROPYLENE FILM CAP
C.TNTL	: TANTALIUM CAP
C.TNTL.CHP	: CHIP TANTALIUM CAP
C.TRIM	: TRIMMER CAP
CN	: CONNECTOR
CN.BS.PIN	: CONNECTOR,BASE PIN
CN.CANNON	: CONNECTOR,CANNON
CN.DIN	: CONNECTOR,DIN
CN.FLAT	: CONNECTOR,FLAT CABLE
CN.FFC	: CONNECTOR,FLEXIBLE FLAT CABLE
CN.HDMI	: HDMI CONNECTOR
CN.PHOTO.R	: PHOTO FIBER SENSOR,RECEIVED
CN.PHOTO.T	: PHOTO FIBER SENSOR,TRANSMITTED
DIODE.ARRAY	: DIODE ARRAY
DIODE.BRG	: DIODE BRIDGE
DIODE.CHP	: CHIP DIODE
DIODE.VAR	: VARACTOR DIODE
DIODE.ZENR	: ZENER DIODE
DIODE.Z.CHP	: CHIP ZENER DIODE
DIODE.SCHOTTKY	: SCHOTTKY BARRIER DIODE
DIODE.PHOT	: PHOTO DIODE
FER.BEAD	: FERRITE BEADS
FER.CORE	: FERRITE CORE
FET.CHP	: CHIP FET
FL.DSPLY	: FLUORESCENT DISPLAY
FLTR.CE	: CERAMIC FILTER
FLTR.COMB	: COMB FILTER MODULE
FLTR.LC.RF	: LC FILTER,EMI
FUSE.CHP	: CHIP FUSE
GND.MTL	: GROUND PLATE
GND.TERM	: GROUND TERMINAL
JUMPER.CN	: JUMPER CONNECTOR
JUMPER.TST	: JUMPER,TEST POINT
L.DTCT	: LIGHT DETECTING MODULE
LED.CHP	: CHIP LED
LED.DSPLY	: LED DISPLAY
LED.INFRD	: LED,INFRARED
PHOT.CPL	: PHOTO COUPLER
PHOT.INTR	: PHOTO INTERRUPTER
PHOT.RFLCT	: PHOTO REFLECTOR
PHOT.TR	: PHOTO TRANSISTOR
PIN.TEST	: PIN,TEST POINT
PTC.THERMISTOR	: POSITIVE TEMPERATURE COEFFICIENT THERMISTOR
R.ANTI.SURGE	: FIXED ANTI SURGE RESISTOR
R.ARRAY	: RESISTOR ARRAY
R.CAR.	: CARBON RESISTOR
R.CAR.CHP	: CHIP RESISTOR
R.CAR.FP	: FLAME PROOF CARBON RESISTOR
R.CEMENT	: CEMENT RESISTOR
R.CHP	: CHIP RESISTOR
R.FUS	: FUSIBLE RESISTOR
R.MTL.CHP	: CHIP METAL FILM RESISTOR
R.MTL.FLM	: METAL FILM RESISTOR
R.MTL.OXD	: METAL OXIDE FILM RESISTOR
R.MTL.PLAT	: METAL PLATE RESISTOR
RSNR.CE	: CERAMIC RESONATOR
RSNR.CRYS	: CRYSTAL RESONATOR
SCR.BND.HD	: BIND HEAD B-TIGHT SCREW
SCR.TERM	: SCREW TERMINAL
SCR.TR	: SCREW,TRANSISTOR
SURG.PRTCT	: SURGE PROTECTOR
SUPRT.PCB	: P.C.B. SUPPORT
SW.LEVER	: LEVER SWITCH
SW.MICRO	: MICRO SWITCH
SW.LEAF	: LEAF SWITCH
SW.PUSH	: PUSH SWITCH
SW.RT	: ROTARY SWITCH
SW.RT.ENC	: ROTARY ENCODER
SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
SW.SLIDE	: SLIDE SWITCH
SW.TACT	: TACT SWITCH
TERM.SP	: SPEAKER TERMINAL
TERM.WRAP	: WRAPPING TERMINAL
THRMST.CHP	: CHIP THERMISTOR
TR	: TRANSISTOR
TR.CHP	: CHIP TRANSISTOR
TR.DGT	: DIGITAL TRANSISTOR
TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
TR.PAIR	: PAIR TRANSISTOR
TRANS	: TRANSFORMER
TRANS.PULS	: PULSE TRANSFORMER
TRANS.PWR	: POWER TRANSFORMER
VARISTOR.CHP	: CHIP VARISTOR
VOLT.SELCT	: VOLTAGE SELECTOR
VR	: ROTARY POTENTIOMETER
VR.MTR	: POTENTIOMETER WITH MOTOR
VR.SLIDE	: SLIDE POTENTIOMETER
VR.SW	: POTENTIOMETER WITH SWITCH
VR.TRIM	: TRIMMER POTENTIOMETER

RX-V673/HTR-6065 | **RX-A720**

DIGITAL

	Ref No.	Part No.	Description			Markets
*		ZC099900	P. C. B.	DIGITAL		
*	CB1-5	WW271700	CN. HDMI	19P HDMI		
	CB8	WD295800	CN. BS. PIN	22P 52793 SE		
	CB21	VQ044700	CN. BS. PIN	16P		
*	CB30	WW271700	CN. HDMI	19P HDMI		
*	CB36	VY939900	CN. BS. PIN	22P 52610 TE		
*	CB61	WW271700	CN. HDMI	19P HDMI		
	CB76	VQ045000	CN. BS. PIN	20P		
	CB78	VK025600	CN. BS. PIN	12P		
	CB79	VK024700	CN. BS. PIN	3P		
	CB81	VB389800	CN. BS. PIN	2P		
	CB82	VN520900	CN. BS. PIN	52045 26P TE		
	CB83	VG518300	PIN. BASE	2P RF TE		
	CB84	VQ047200	CN. BS. PIN	9P		
	CB940	WG939700	CN. USB	4P SE		
	CB942	LB919040	CN. BS. PIN	4P		
	CB943	VB389900	CN. BS. PIN	3P		
	CB944	VK026500	CN. BS. PIN	6P		
	CB945-946	V9356900	CN. JE	19P SE		
	CB947	VL844800	CN. BS. PIN	4P		
	CB948	V9356900	CN. JE	19P SE		
	CB951	WY212400	CN. LAN	8P RJSE1AG3870-R		
	CB952	VB390100	CN. BS. PIN	5P		
	C2	WJ344400	C. CE. CHP	22uF	6. 3V	
	C4	US663100	C. CE. CHP	1000pF	50V	
	C5	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C6-8	US625100	C. CE. CHP	0. 1uF	10V	
	C9-11	US663100	C. CE. CHP	1000pF	50V	
	C12	US662100	C. CE. CHP	100pF	50V	
	C13	US634100	C. CE. CHP	0. 01uF	16V	
	C14	US046100	C. CE. CHP	1uF	25V	
	C17	US625100	C. CE. CHP	0. 1uF	10V	
	C20	US625100	C. CE. CHP	0. 1uF	10V	
	C21	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C22-23	US625100	C. CE. CHP	0. 1uF	10V	
	C24-25	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C26	US625100	C. CE. CHP	0. 1uF	10V	
	C27	US663390	C. CE. CHP	3900pF	50V	
	C28	WD758300	C. CE. CHP	10uF	10V	
	C29	US662100	C. CE. CHP	100pF	50V	
	C30	US625100	C. CE. CHP	0. 1uF	10V	
	C32	US662100	C. CE. CHP	100pF	50V	
	C35	US663100	C. CE. CHP	1000pF	50V	
	C37-39	US625100	C. CE. CHP	0. 1uF	10V	
	C40	US663100	C. CE. CHP	1000pF	50V	
	C41-42	US625100	C. CE. CHP	0. 1uF	10V	
	C43-44	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C45-46	US625100	C. CE. CHP	0. 1uF	10V	
	C47	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C48	US625100	C. CE. CHP	0. 1uF	10V	
	C49	US663100	C. CE. CHP	1000pF	50V	
	C50	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C51	US663100	C. CE. CHP	1000pF	50V	
	C53-54	US663100	C. CE. CHP	1000pF	50V	
	C55-56	WG888300	C. CE. M. CHP	10uF	6. 3V	
	C57-61	US625100	C. CE. CHP	0. 1uF	10V	
	C62-63	US663100	C. CE. CHP	1000pF	50V	

✻ New Parts

Ref No.	Part No.	Description			Markets
C65-66	US662100	C. CE. CHP	100pF	50V	
C69	US625100	C. CE. CHP	0. 1uF	10V	
C73	US663100	C. CE. CHP	1000pF	50V	
C74	WG888300	C. CE. M. CHP	10uF	6. 3V	
C75-77	US625100	C. CE. CHP	0. 1uF	10V	
C78	US663100	C. CE. CHP	1000pF	50V	
C81	US662100	C. CE. CHP	100pF	50V	
C83-85	US046100	C. CE. CHP	1uF	25V	
C93-94	US661100	C. CE. CHP	10pF	50V D	
C95-96	US662100	C. CE. CHP	100pF	50V	
C99	US663100	C. CE. CHP	1000pF	50V	
C100	US046100	C. CE. CHP	1uF	25V	
C101	US662470	C. CE. CHP	470pF	50V	
C102	US663100	C. CE. CHP	1000pF	50V	
C104-105	US625100	C. CE. CHP	0. 1uF	10V	
C107	US625100	C. CE. CHP	0. 1uF	10V	
C108	US046100	C. CE. CHP	1uF	25V	
C109	US663100	C. CE. CHP	1000pF	50V	
C110-112	US625100	C. CE. CHP	0. 1uF	10V	
C113	WG888300	C. CE. M. CHP	10uF	6. 3V	
C114-115	US625100	C. CE. CHP	0. 1uF	10V	
C116	WG888300	C. CE. M. CHP	10uF	6. 3V	
C117-119	US625100	C. CE. CHP	0. 1uF	10V	
C120-121	WG888300	C. CE. M. CHP	10uF	6. 3V	
C122	US625100	C. CE. CHP	0. 1uF	10V	
C123	US663100	C. CE. CHP	1000pF	50V	
C124-125	US625100	C. CE. CHP	0. 1uF	10V	
C126	WG888300	C. CE. M. CHP	10uF	6. 3V	
C127-128	US663100	C. CE. CHP	1000pF	50V	
C129	WG888300	C. CE. M. CHP	10uF	6. 3V	
C133	US662100	C. CE. CHP	100pF	50V	
C136	US662100	C. CE. CHP	100pF	50V	
C137	WG888300	C. CE. M. CHP	10uF	6. 3V	
C138-139	US625100	C. CE. CHP	0. 1uF	10V	
C142	US634100	C. CE. CHP	0. 01uF	16V	
C143-144	WG888300	C. CE. M. CHP	10uF	6. 3V	
C145	US663100	C. CE. CHP	1000pF	50V	
C147	US625100	C. CE. CHP	0. 1uF	10V	
C148	US663100	C. CE. CHP	1000pF	50V	
C149-150	US625100	C. CE. CHP	0. 1uF	10V	
C152-153	US625100	C. CE. CHP	0. 1uF	10V	
C154	WG888300	C. CE. M. CHP	10uF	6. 3V	
C155	US625100	C. CE. CHP	0. 1uF	10V	
C156	US663100	C. CE. CHP	1000pF	50V	
C157	WG888300	C. CE. M. CHP	10uF	6. 3V	
C159-160	US663100	C. CE. CHP	1000pF	50V	
C161	WD758300	C. CE. CHP	10uF	10V	
C162	US634100	C. CE. CHP	0. 01uF	16V	
C163	WD758300	C. CE. CHP	10uF	10V	
C250	WD758300	C. CE. CHP	10uF	10V	
C251	US046100	C. CE. CHP	1uF	25V	
C252-253	US625100	C. CE. CHP	0. 1uF	10V	
C255	WG888300	C. CE. M. CHP	10uF	6. 3V	
C257-258	US625100	C. CE. CHP	0. 1uF	10V	
C261-262	US625100	C. CE. CHP	0. 1uF	10V	
C271	WJ932500	C. CE. CHP	1uF	6. 3V	
C273	US625100	C. CE. CHP	0. 1uF	10V	

✻ New Parts

RX-V673/HTR-6065 | **RX-A720**

DIGITAL

Ref No.	Part No.	Description			Markets
C277	US625100	C. CE. CHP	0. 1uF	10V	
C279	WJ932500	C. CE. CHP	1uF	6. 3V	
C281	US625100	C. CE. CHP	0. 1uF	10V	
C286	US625100	C. CE. CHP	0. 1uF	10V	
C288	US634100	C. CE. CHP	0. 01uF	16V	
C289	US625100	C. CE. CHP	0. 1uF	10V	
C291	US662470	C. CE. CHP	470pF	50V	
C294	US034820	C. CE. CHP	0. 082uF	16V K	
C295	US634100	C. CE. CHP	0. 01uF	16V	
C297-298	US625100	C. CE. CHP	0. 1uF	10V	
C299-300	US661100	C. CE. CHP	10pF	50V D	
C301	WG888300	C. CE. M. CHP	10uF	6. 3V	
C302-303	US625100	C. CE. CHP	0. 1uF	10V	
C304	WG888300	C. CE. M. CHP	10uF	6. 3V	
C352	WG888300	C. CE. M. CHP	10uF	6. 3V	
C353	US663100	C. CE. CHP	1000pF	50V	
C354	US625100	C. CE. CHP	0. 1uF	10V	
C355-361	US634100	C. CE. CHP	0. 01uF	16V	
C363	WQ614300	C. CE. CHP	22uF	10VE	
C364	US625100	C. CE. CHP	0. 1uF	10V	
C365	WG888300	C. CE. M. CHP	10uF	6. 3V	
C500-503	US663100	C. CE. CHP	1000pF	50V	
C504	UF417470	C. EL. CHP	47uF	6. 3V	
C505	WG888300	C. CE. M. CHP	10uF	6. 3V	
C506-507	UF417470	C. EL. CHP	47uF	6. 3V	
C509-513	WG888300	C. CE. M. CHP	10uF	6. 3V	
C514-554	US625100	C. CE. CHP	0. 1uF	10V	
C556-565	US625100	C. CE. CHP	0. 1uF	10V	
C568	US663100	C. CE. CHP	1000pF	50V	
C569	US625100	C. CE. CHP	0. 1uF	10V	
C578	WG888300	C. CE. M. CHP	10uF	6. 3V	
C579-585	US625100	C. CE. CHP	0. 1uF	10V	
C587	US625100	C. CE. CHP	0. 1uF	10V	
C591-594	WG888300	C. CE. M. CHP	10uF	6. 3V	
C597	WG888300	C. CE. M. CHP	10uF	6. 3V	
C634-635	US663100	C. CE. CHP	1000pF	50V	
C636-637	WG888300	C. CE. M. CHP	10uF	6. 3V	
C638-643	US625100	C. CE. CHP	0. 1uF	10V	
C644-645	US663100	C. CE. CHP	1000pF	50V	
C646	US625100	C. CE. CHP	0. 1uF	10V	
C647	WG888300	C. CE. M. CHP	10uF	6. 3V	
C649	US663100	C. CE. CHP	1000pF	50V	
C650	US625100	C. CE. CHP	0. 1uF	10V	
C653	US625100	C. CE. CHP	0. 1uF	10V	
C654-655	US662100	C. CE. CHP	100pF	50V	
C656	US663100	C. CE. CHP	1000pF	50V	
C662	US662100	C. CE. CHP	100pF	50V	
C664-665	US046100	C. CE. CHP	1uF	25V	
C666	WD758300	C. CE. CHP	10uF	10V	
C667	US662470	C. CE. CHP	470pF	50V	
C668	US661220	C. CE. CHP	22pF	50V	
C669	WD758300	C. CE. CHP	10uF	10V	
C670-671	US625100	C. CE. CHP	0. 1uF	10V	
C672	US046100	C. CE. CHP	1uF	25V	
C673	US625100	C. CE. CHP	0. 1uF	10V	
C750-753	US663100	C. CE. CHP	1000pF	50V	
C754	US625100	C. CE. CHP	0. 1uF	10V	

✻ New Parts

Ref No.	Part No.	Description			Markets
C755-762	US663100	C. CE. CHP	1000pF	50V	
C763	US625100	C. CE. CHP	0. 1uF	10V	
C764-767	US663100	C. CE. CHP	1000pF	50V	
C768	US625100	C. CE. CHP	0. 1uF	10V	
C769	UF027330	C. EL. CHP	33uF	10V	
C770	US663100	C. CE. CHP	1000pF	50V	
C771-772	US625100	C. CE. CHP	0. 1uF	10V	
C773-774	US662100	C. CE. CHP	100pF	50V	
C775	US625100	C. CE. CHP	0. 1uF	10V	
C776-777	US663100	C. CE. CHP	1000pF	50V	
C778-779	US625100	C. CE. CHP	0. 1uF	10V	
C780	US046100	C. CE. CHP	1uF	25V	
C781	US663100	C. CE. CHP	1000pF	50V	
C782	US662100	C. CE. CHP	100pF	50V	
C783	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C784	US662100	C. CE. CHP	100pF	50V	
C785	US625100	C. CE. CHP	0. 1uF	10V	
C786	US663100	C. CE. CHP	1000pF	50V	
C787-791	US625100	C. CE. CHP	0. 1uF	10V	
C792-795	US046100	C. CE. CHP	1uF	25V	
C796	US625100	C. CE. CHP	0. 1uF	10V	
C797	US046100	C. CE. CHP	1uF	25V	
C798	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C799-800	US046100	C. CE. CHP	1uF	25V	
C801-802	US625100	C. CE. CHP	0. 1uF	10V	
C803	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C804	US046100	C. CE. CHP	1uF	25V	
C805	US625100	C. CE. CHP	0. 1uF	10V	
C808-809	US663100	C. CE. CHP	1000pF	50V	
C829-848	US663100	C. CE. CHP	1000pF	50V	
C9201-9207	WG888300	C. CE. M. CHP	10uF	6. 3V	
C9210	US643470	C. CE. CHP	4700pF	25V	
C9211	US625100	C. CE. CHP	0. 1uF	10V	
C9212	UF437100	C. EL. CHP	10uF	16V	
C9213	US625100	C. CE. CHP	0. 1uF	10V	
C9214-9215	US661180	C. CE. CHP	18pF	50V	
C9216	US625100	C. CE. CHP	0. 1uF	10V	
C9217	US634100	C. CE. CHP	0. 01uF	16V	
C9218-9251	US625100	C. CE. CHP	0. 1uF	10V	
C9252-9253	UF437100	C. EL. CHP	10uF	16V	
C9254-9255	US643470	C. CE. CHP	4700pF	25V	
C9256-9265	US625100	C. CE. CHP	0. 1uF	10V	
C9266	US634100	C. CE. CHP	0. 01uF	16V	
C9267-9268	US625100	C. CE. CHP	0. 1uF	10V	
C9269-9270	WB571200	C. MYLA. CHP	0. 00082uF	16V	
C9271	US662470	C. CE. CHP	470pF	50V	
C9272	WG888300	C. CE. M. CHP	10uF	6. 3V	
C9273	US661120	C. CE. CHP	12pF	50V	
C9274	US661150	C. CE. CHP	15pF	50V	
C9275	WG888300	C. CE. M. CHP	10uF	6. 3V	
C9276	UB214680	C. CE. CHP	0. 068uF	25V	
C9278	US643470	C. CE. CHP	4700pF	25V	
C9279-9283	US625100	C. CE. CHP	0. 100uF	10V	
C9284-9285	WG888300	C. CE. M. CHP	10uF	6. 3V	
C9286-9289	US046100	C. CE. CHP	1uF	25V	
C9290-9293	US625100	C. CE. CHP	0. 1uF	10V	
C9295	US662470	C. CE. CHP	470pF	50V	

✻ New Parts

RX-V673/HTR-6065 | **RX-A720**

DIGITAL

Ref No.	Part No.	Description			Markets
C9296	US663100	C. CE. CHP	1000pF	50V	
C9315-9317	US634100	C. CE. CHP	0. 01uF	16V	
C9318	US625100	C. CE. CHP	0. 1uF	10V	
C9401	US625100	C. CE. CHP	0. 1uF	10V	
C9402	WH772100	C. EL	1000uF	10V	
C9403	US625100	C. CE. CHP	0. 1uF	10V	
C9404	US643470	C. CE. CHP	4700pF	25V	
C9408	US046100	C. CE. CHP	1uF	25V	
C9409	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C9410	UF417470	C. EL. CHP	47uF	6. 3V	
C9417	US625100	C. CE. CHP	0. 1uF	10V	
C9423	UF438100	C. EL. CHP	100uF	16V	
C9425	WJ344400	C. CE. CHP	22uF	6. 3V	
C9426	WG888300	C. CE. M. CHP	10uF	6. 3V	
C9428-9429	US663100	C. CE. CHP	1000pF	50V	
C9430	US634100	C. CE. CHP	0. 01uF	16V	
C9431	US625100	C. CE. CHP	0. 1uF	10V	
C9432	US044220	C. CE. CHP	0. 022uF	25V B	
C9433	US663390	C. CE. CHP	3900pF	50V	
C9434	WD758300	C. CE. CHP	10uF	10V	
C9436	WJ344400	C. CE. CHP	22uF	6. 3V	
C9438-9439	US663100	C. CE. CHP	1000pF	50V	
C9440	US663330	C. CE. CHP	3300pF	50V	
C9441-9442	US625100	C. CE. CHP	0. 1uF	10V	
C9443	US663390	C. CE. CHP	3900pF	50V	
C9444	WD758300	C. CE. CHP	10uF	10V	
C9445	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C9447	WJ344400	C. CE. CHP	22uF	6. 3V	
C9448	US634100	C. CE. CHP	0. 01uF	16V	
C9450-9451	US663100	C. CE. CHP	1000pF	50V	
C9452	US643680	C. CE. CHP	6800pF	25V	
C9453-9454	US625100	C. CE. CHP	0. 1uF	10V	
C9455	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C9456	US663390	C. CE. CHP	3900pF	50V	
C9458	WD758300	C. CE. CHP	10uF	10V	
C9459-9460	US625100	C. CE. CHP	0. 1uF	10V	
C9461	US634100	C. CE. CHP	0. 01uF	16V	
C9462	WV169100	C. CE. CHP	2. 2uF	10V	
C9463	WD758300	C. CE. CHP	10uF	10V	
C9464-9465	US625100	C. CE. CHP	0. 1uF	10V	
C9466	WV169100	C. CE. CHP	2. 2uF	10V	
C9467-9468	US062680	C. CE. CHP	680pF	50V B	
C9469	US625100	C. CE. CHP	0. 1uF	10V	
C9470	US046100	C. CE. CHP	1uF	25V	
C9471	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C9472	US625100	C. CE. CHP	0. 1uF	10V	
C9473	US663150	C. CE. CHP	1500pF	50V	
C9474	US643470	C. CE. CHP	4700pF	25V	
C9475	US663100	C. CE. CHP	1000pF	50V	
C9476	UF128470	C. EL. CHP	470uF	10V	
C9478	WD758300	C. CE. CHP	10uF	10V	
C9480	US662100	C. CE. CHP	100pF	50V	
C9481	US663100	C. CE. CHP	1000pF	50V	
C9485	WD758300	C. CE. CHP	10uF	10V	
C9497-9498	US634100	C. CE. CHP	0. 01uF	16V	
C9501-9502	UF418100	C. EL. CHP	100uF	6. 3V	
C9503-9509	WG888300	C. CE. M. CHP	10uF	6. 3V	

✻ New Parts

Ref No.	Part No.	Description			Markets
C9510-9528	US625100	C. CE. CHP	0. 1uF	10V	
C9530-9533	US663100	C. CE. CHP	1000pF	50V	
C9535-9545	US663100	C. CE. CHP	1000pF	50V	
✻ C9546	US660400	C. CE. CHP	4pF	50V	
C9548-9557	US634100	C. CE. CHP	0. 01uF	16V	
C9562	US044220	C. CE. CHP	0. 022uF	25V B	
C9563-9568	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C9570-9571	WJ932500	C. CE. CHP	1uF	6. 3V	
C9572-9573	US661150	C. CE. CHP	15pF	50V	
C9575	US634100	C. CE. CHP	0. 01uF	16V	
C9578-9579	US634100	C. CE. CHP	0. 01uF	16V	
D351	WE674800	VARISTOR. CHP	AVRL161A1R1NTB		
D602	VV220700	DIODE. SCHOTTKY	RB501V-40		
✻ D607	WZ699800	DIODE	RCLAMP0584J		
D610	WE674800	VARISTOR. CHP	AVRL161A1R1NTB		
D750	WR148500	DIODE	RB521S-30TE61		
D9401-9402	WW783900	DIODE	1SS355VM		
D9403-9405	WR148500	DIODE	RB521S-30TE61		
D9406-9407	WW783900	DIODE	1SS355VM		
IC6	YC287A00	IC	RP130Q181D-TR-F		
IC8	YC289A00	IC	RP130Q501D-TR		
IC10	XR680A00	IC	TC7SH08FU(TE85L, JF		
IC21	X8841A00	IC	ADV7180BSTZ		
IC27	YC287A00	IC	RP130Q181D-TR-F		
✻ IC30	YD186A00	IC. HDMI	TMDS261BPAGR		
✻ IC31	YE357A00	IC	RP132H331D-T1-FE		
IC51	X8378A00	IC	TC7SH125FU(TE85L, F		
✻ IC53	YA560B00	IC	NT5SV8M16HS-6K		
✻ IC55	YD992A00	IC	RP130Q251D-TR-FE		
✻ IC56	YC827A00	IC	R1172N301D-TR-F		
IC57	YC286A00	IC	RP130Q121D-TR-F		
✻ IC60	YD987A00	IC	R1163N501B-TR-FE		
IC64	X0199B00	IC	TC74VHC157FT(EL, K)		
IC65	X7787A00	IC	TC74LCX245FT(EL, K)		
IC66	XZ509A00	IC	TC74VHCU04FT INVER		
IC75	XR680A00	IC	TC7SH08FU(TE85L, JF		
IC76	X5875A00	IC	SN74LV4051APWR		
✻ IC77	YE269D00	IC. MEMORY	MX29LV640EBTI-70G		(written)
IC78	X5875A00	IC	SN74LV4051APWR		
IC79	X7942B00	IC	TC74VHC273FT(EL, K)		
IC80	XW633A00	IC	TC7SH32FU		
IC81	X7942B00	IC	TC74VHC273FT(EL, K)		
IC82	YD355A00	IC. MEMORY	R1EX25512ATA00A EE		
IC84-85	YC288A00	IC	RP130Q331D-TR-F		
IC86	YC289A00	IC	RP130Q501D-TR		
IC87	X8531A00	IC	TC7WZ32FK		
IC91	X8121A00	IC	TC7SH86FU EX-OR		
IC92	X4453A00	IC	SN74LVC1G17DCKR		
IC93	X9692A00	IC	TC7WH126FU		
✻ IC921	YD998A00	IC	D80YK113CPTP400		
IC922	X9625B00	IC. MEMORY	M12L64164A-5TG		
✻ IC923	YE266D00	IC. MEMORY	W25Q80BVSSIG SPI F		(written)
IC924	YD216A00	IC	PCM9211PTR		
IC926-927	XW633A00	IC	TC7SH32FU		
IC929	X9292A00	IC	R1172H121D-T1-F		
IC930	YC288A00	IC	RP130Q331D-TR-F		
IC931	YC289A00	IC	RP130Q501D-TR		

✻ New Parts

RX-V673/HTR-6065 **RX-A720**

DIGITAL

	Ref No.	Part No.	Description		Markets
	IC940	YA255A00	IC	R1172H501D-T1-F	
	IC941	YC288A00	IC	RP130Q331D-TR-F	
*	IC945	YD570A00	IC	PCM5101PWR	
	IC946	YC288A00	IC	RP130Q331D-TR-F	
*	IC947	YE478A00	IC	BD7542F-E2 OPAMP	
	IC949	X4453A00	IC	SN74LVC1G17DCKR	
*	IC952	YE488A00	IC	M12L2561616A-5TG2A	
*	IC953	YE417E00	IC. MEMORY	MX29GL256FLT2I-90Q	(written)
	PN941	WS488500	STYLE. PIN	L=90 #18	
	PN943	WS488500	STYLE. PIN	L=90 #18	
	PN945	WS488500	STYLE. PIN	L=90 #18	
	Q5-10	WZ461800	TR. CHP	2SC4081UBTLR	
	Q11	WZ703400	FET	RAL035P01	
	Q12	WW782000	TR. DGT	DTA044EUBTL	
	Q14-15	WZ461800	TR. CHP	2SC4081UBTLR	
	Q17	WZ703400	FET	RAL035P01	
	Q18	WW782000	TR. DGT	DTA044EUBTL	
	Q19-20	WZ461800	TR. CHP	2SC4081UBTLR	
	Q21	WE834500	FET	UPA672T-T1-A	
	Q250-251	WZ461800	TR. CHP	2SC4081UBTLR	
	Q252	WZ461700	TR. CHP	2SA1576UBTLR	
	Q253	WZ461800	TR. CHP	2SC4081UBTLR	
	Q351-352	WZ461800	TR. CHP	2SC4081UBTLR	
	Q750-753	WY001400	TR. ARRAY	HN4B01JE	
	Q754-759	WZ461700	TR. CHP	2SA1576UBTLR	
	Q760	WZ461800	TR. CHP	2SC4081UBTLR	
	Q9201	WZ703400	FET	RAL035P01	
	Q9202	WW782000	TR. DGT	DTA044EUBTL	
	Q9401	WZ703400	FET	RAL035P01	
	Q9402	WW782000	TR. DGT	DTA044EUBTL	
	Q9404	WW782000	TR. DGT	DTA044EUBTL	
	Q9405	WW782100	TR. DGT	DTC014EUBTL	
	Q9406	WZ703400	FET	RAL035P01	
	Q9407	WZ461700	TR. CHP	2SA1576UBTLR	
	Q9408	WZ703400	FET	RAL035P01	
	R9401	WB784700	R. MTL. FLM	6.8Ω 1W	
*	XL1	WZ730400	RSNR. CRYS	28.63636MHz DSX321	
*	XL21	WZ730400	RSNR. CRYS	28.63636MHz DSX321	
	XL51	WK841200	RSNR. CRYS	27MHz DSO321SRAB	
	XL75	WA782500	RSNR. CE	8.000MHz	
	XL921	WS190000	RSNR. CRYS	24.576MHZ DSX321G	
	XL922	WN318100	RSNR. CRYS	20MHz DSX321G	
	XL951	WJ081300	RSNR. CRYS	24MHz DSX321G	

* New Parts

RX-V673/HTR-6065

OPERATION

	Ref No.	Part No.	Description		Markets
*		ZC102100	P. C. B.	OPERATION	UC
*		ZC102200	P. C. B.	OPERATION	RTKABGFLSH
	CB401	VQ045500	CN. BS. PIN	26P	
	CB402	VQ047000	CN. BS. PIN	6P	
	CB446	WQ680200	CN. USB	4P TE AAPVA004C0	
	CB451	VQ961100	CN. BS. PIN	8P	
	CB452	VQ962100	CN. BS. PIN	18P	
	CB453	VQ961800	CN. BS. PIN	15P	
	CB454	VQ961400	CN. BS. PIN	11P	
	CB455	VQ963000	CN. BS. PIN	9P	
	CB458	VQ044200	CN. BS. PIN	6P	
	CB459-461	V9357000	CN	19P TE	
	CB463	VQ585700	CN. JUMPER	7P	
	CB472	VB858300	CN. BS. PIN	4P	
	CB473	VK026900	CN	10P	
	C4002	US065100	C. CE. CHP	0.1uF 50V B	
	C4012-4013	US035100	C. CE. CHP	0.1uF 16V B	
	C4015	UR268220	C. EL	220uF 50V	
	C4016	UM388330	C. EL	330uF 6.3V	
	C4017	US035100	C. CE. CHP	0.1uF 16V B	
	C4018	US061680	C. CE. CHP	68pF 50V B	
	C4019	US065100	C. CE. CHP	0.1uF 50V B	
	C4020-4021	US163100	C. CE. CHP	1000pF 50V	
	C4022	US064100	C. CE. CHP	0.01uF 50V B	
	C4024	US063100	C. CE. CHP	1000pF 50V B	
	C4025-4026	US065100	C. CE. CHP	0.1uF 50V B	
	C4027	US035100	C. CE. CHP	0.1uF 16V B	
	C4028	US062100	C. CE. CHP	100pF 50V B	
	C4030	US062100	C. CE. CHP	100pF 50V B	
	C4031	US062470	C. CE. CHP	470pF 50V B	
	C4032-4033	US035100	C. CE. CHP	0.1uF 16V B	
	C4034	UM417100	C. EL	10uF 50V	
	C4035	US035100	C. CE. CHP	0.1uF 16V B	
	C4037	US064100	C. CE. CHP	0.01uF 50V B	
	C4039	US062220	C. CE. CHP	220pF 50V B	
	C4081	WH773700	C. EL	470uF 16V	
	C4082	WY034800	C. CE. CHP	0.022uF 50V	
	C4083	WM490200	C. CE. M. CHP	0.47uF 50V	
	C4084	UM416100	C. EL	1uF 50V	
	C4085	UM416220	C. EL	2.2uF 50V	
	C4086	US046100	C. CE. CHP	1uF 25V	
	C4087	WG251600	C. CE. CHP	4.7uF 6.3V	
	C4091	US035100	C. CE. CHP	0.1uF 16V B	
	C4217	UR237100	C. EL	10uF 16V	
	C4225	UR067100	C. EL	10uF 50V	UC
	C4225	UU267100	C. EL	10uF 50V	RTKABGFLSH
	C4226	WK041800	C. EL	10uF 16V	UC
	C4226	UR267100	C. EL	10uF 50V	RTKABGFLSH
	C4227-4228	UR237100	C. EL	10uF 16V	
	C4229	WJ608100	C. MYLAR	100pF 100V	
	C4230	WY466700	C. PP	820pF 100V	UC
	C4230	WJ608800	C. MYLAR	820pF 100V	RTKABGFLSH
	C4234	WK041800	C. EL	10uF 16V	
	C4235-4236	WJ608100	C. MYLAR	100pF 100V	
	C4238	WK041800	C. EL	10uF 16V	
	C4239	US035100	C. CE. CHP	0.1uF 16V B	
	C4240	WY466700	C. PP	820pF 100V	UC

* New Parts

RX-V673/HTR-6065

OPERATION

Ref No.	Part No.	Description			Markets
C4240	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4241	US035100	C. CE. CHP	0. 1uF	16V B	
C4242	WK041800	C. EL	10uF	16V	UC
C4242	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4243-4244	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C4245	UR067100	C. EL	10uF	50V	UC
C4245	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4246	UR238100	C. EL	100uF	16V	
C4250	UR067100	C. EL	10uF	50V	UC
C4250	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4251	WK041800	C. EL	10uF	16V	UC
C4251	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4252	UR067100	C. EL	10uF	50V	UC
C4252	UU367470	C. EL	47uF	50V	RTKABGFLSH
C4253	WY466700	C. PP	820pF	100V	UC
C4253	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4255	US062100	C. CE. CHP	100pF	50V B	
C4257	WJ611000	C. MYLAR	0. 047uF	100V	
C4258	UR267100	C. EL	10uF	50V	
C4259-4260	UR067100	C. EL	10uF	50V	
C4261	WJ609900	C. MYLAR	6800pF	100V	
C4262	US126100	C. CE. CHP	1uF	10V	
C4263	US062100	C. CE. CHP	100pF	50V B	
C4264	US126100	C. CE. CHP	1uF	10V	
C4265	UR067100	C. EL	10uF	50V	UC
C4265	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4266	UR257100	C. EL	10uF	35V	UC
C4266	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4267	US126100	C. CE. CHP	1uF	10V	
C4268	WY466700	C. PP	820pF	100V	UC
C4268	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4271	US035100	C. CE. CHP	0. 1uF	16V B	
C4272	WY466700	C. PP	820pF	100V	UC
C4272	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4273	UR257100	C. EL	10uF	35V	UC
C4273	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4274	UR067100	C. EL	10uF	50V	UC
C4274	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4275	US062100	C. CE. CHP	100pF	50V B	
C4276	US063470	C. CE. CHP	4700pF	50V B	
C4277	US062100	C. CE. CHP	100pF	50V B	
C4278	US035100	C. CE. CHP	0. 1uF	16V B	
C4279	UR067100	C. EL	10uF	50V	UC
C4279	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4280	UR257100	C. EL	10uF	35V	UC
C4280	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4281	WY466700	C. PP	820pF	100V	UC
C4281	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4282	UR067470	C. EL	47uF	50V	
C4284	US035100	C. CE. CHP	0. 1uF	16V B	
C4285	UR067470	C. EL	47uF	50V	
C4287	WY466700	C. PP	820pF	100V	UC
C4287	WJ608800	C. MYLAR	820pF	100V	RTKABGFLSH
C4288	WK041800	C. EL	10uF	16V	
C4289	UR257100	C. EL	10uF	35V	UC
C4289	UR267100	C. EL	10uF	50V	RTKABGFLSH
C4290	UR067100	C. EL	10uF	50V	UC

⚠ New Parts

Ref No.	Part No.	Description			Markets
C4290	UU237100	C. EL	10uF	16V	RTKABGFLSH
C4291	US062100	C. CE. CHP	100pF	50V B	
C4292	US063470	C. CE. CHP	4700pF	50V B	
C4294	WD758300	C. CE. CHP	10uF	10V	
C4318-4321	WJ610200	C. MYLAR	0. 01uF	100V	
C4401-4402	US063100	C. CE. CHP	1000pF	50V B	
C4411-4412	WJ609500	C. MYLAR	3300pF	100V	
C4413	US064100	C. CE. CHP	0. 01uF	50V B	
C4414	US063100	C. CE. CHP	1000pF	50V B	
C4415	US035100	C. CE. CHP	0. 1uF	16V B	
C4421	US063100	C. CE. CHP	1000pF	50V B	
C4422	UM397100	C. EL	10uF	16V	
C4423	WV360900	C. EL	22uF	16V	
C4424	US064100	C. CE. CHP	0. 01uF	50V B	
C4425	US062100	C. CE. CHP	100pF	50V B	
C4426	UM397470	C. EL	47uF	16V	
C4427	US061330	C. CE. CHP	33pF	50V B	
C4428	UM397100	C. EL	10uF	16V	
C4430	WV360900	C. EL	22uF	16V	
C4432	WV360900	C. EL	22uF	16V	
C4481	US063100	C. CE. CHP	1000pF	50V B	
C4482	US062100	C. CE. CHP	100pF	50V B	
C4483-4484	US163100	C. CE. CHP	1000pF	50V	
C4487	WD758300	C. CE. CHP	10uF	10V	
C4901	US035100	C. CE. CHP	0. 1uF	16V B	RTKABGFLSH
D4001-4002	VT332900	DIODE	1SS355		
D4006-4007	WY163000	DIODE. ZENR	UDZV4. 3B		
D4010	VT332900	DIODE	1SS355		
D4011	V2598200	LED	SIR-505ST		
D4012	VT332900	DIODE	1SS355		
D4081-4085	VT332900	DIODE	1SS355		
D4086	WY165200	DIODE. ZENR	UDZV36B		
D4091-4092	VT332900	DIODE	1SS355		
D4203-4205	VT332900	DIODE	1SS355		
D4303	VT332900	DIODE	1SS355		
D4401	WP080300	LED. BLUE	Blue SLR343BC4T3F		
D4411-4412	VT332900	DIODE	1SS355		
D4421-4422	VT332900	DIODE	1SS355		
D4423	WY163200	DIODE. ZENR	UDZV5. 1B		
D4424	WR095700	LED	8224-10SDRD/S530A3		
D4901-4903	VT332900	DIODE	1SS355		UC
IC401	X6386A00	IC	M66003-0131FP		
IC451-454	X8136A00	IC	LM833MX		
IC455	YD360A00	IC	NJM2505A VIDEO AMP		
IC456	X9870A00	IC	PCM1681PWPR		
IC457	X4928A00	IC	KIA7805API 5V		
IC471	X7378A00	IC	NJM4565M(TE1)		
IC481	YC288A00	IC	RP130Q331D-TR-F		
IC491	YA381A00	IC	LM19CIZ/LF THERMAL		
IC491	YA381A00	IC	LM19CIZ/LF THERMAL		RTKABGFLSH
JK471	WZ975700	JACK. PHONE	MSJ-064-05B-B-RF		
JK472	WJ117300	JACK. MINI	MSJ-2200C AG		
PJ401	WZ631700	JACK. PIN	1P MTJ-032-21B-NI		
Q4001-4003	WC529400	TR	KTC3875S Y GR RTK		
Q4004	VV655400	TR. DGT	DTC114EKA		
Q4005	WC397700	TR	2N5401C-AT		
Q4006-4009	WC529400	TR	KTC3875S Y GR RTK		

⚠ New Parts

RX-V673/HTR-6065

OPERATION

	Ref No.	Part No.	Description		Markets
	Q4012	WC529400	TR	KTC3875S Y GR RTK	
	Q4081	WQ381000	FET	MCH6336-TL-E	
	Q4082	VV655400	TR. DGT	DTC114EKA	
⚠	Q4083-4084	WW223000	TR	2SC5964-TD-E	
⚠	Q4085	WC397700	TR	2N5401C-AT	
	Q4301	VV655400	TR. DGT	DTC114EKA	
	Q4302	VV655000	TR. DGT	DTA114EKA	
	Q4401-4402	WC529400	TR	KTC3875S Y GR RTK	
	R4066-4067	WW969500	R. MTL. OXD	120Ω 1/4W	
	R4225	WW965300	R. MTL. OXD	2.2Ω 1/4W	
	R4293	V8070500	R. MTL. FLM	22Ω 1W	
	R4320-4321	WW974100	R. MTL. OXD	10KΩ 1/4W	
	R4331-4332	WQ072300	R. MTL. OXD	2.2Ω 1W	
	R4413-4414	V8071400	R. MTL. FLM	560Ω 1W	
	RY461	WJ122400	RELAY	981-2A-24DS-SP7	
	SW401-409	WD483100	SW. TACT	SKRGAAD010	
	SW411-421	WD483100	SW. TACT	SKRGAAD010	
	SW471	V9597100	SW. RT. ENC	EC12E2460802	
	SW472-473	WD483100	SW. TACT	SKRGAAD010	
	TE461	WB213900	TERM. SP	MSP-113V2-03 PUSH	
	TH491-492	WT698300	THERMISTOR	WC92NA103J1	UC
	U4001	WQ600700	L. DTCT	SM3385VMH6	
	V4001	WW890900	FL. DSPLY	18-MT-11GNK	
*		ZA889400	SPACER	4.3x8x30	

* New Parts

RX-A720

OPERATION

	Ref No.	Part No.	Description		Markets
*		ZC102400	P. C. B.	OPERATION	UC
*		ZC102500	P. C. B.	OPERATION	A
	CB401	VQ045500	CN. BS. PIN	26P	
	CB402	VQ044200	CN. BS. PIN	6P	
	CB446	WQ680200	CN. USB	4P TE AAPVA004C0	
	CB451	VQ961100	CN. BS. PIN	8P	
	CB452	VQ962100	CN. BS. PIN	18P	
	CB453	VQ961800	CN. BS. PIN	15P	
	CB454	VQ961400	CN. BS. PIN	11P	
	CB455	VQ963000	CN. BS. PIN	9P	
	CB458	VQ047000	CN. BS. PIN	6P	
	CB459-461	V9357000	CN	19P TE	
	CB463	VQ585700	CN. JUMPER	7P	
	CB471	VB858300	CN. BS. PIN	4P	
	C4001	US065100	C. CE. CHP	0.1uF 50V B	
	C4002	US035100	C. CE. CHP	0.1uF 16V B	
	C4003-4004	US063100	C. CE. CHP	1000pF 50V B	
	C4005	US035100	C. CE. CHP	0.1uF 16V B	
	C4007	UR268220	C. EL	220uF 50V	
	C4008	UM388330	C. EL	330uF 6.3V	
	C4009	US135100	C. CE. CHP	0.1uF 16V	
	C4010	US061680	C. CE. CHP	68pF 50V B	
	C4011	US065100	C. CE. CHP	0.1uF 50V B	
	C4012	US064100	C. CE. CHP	0.01uF 50V B	
	C4013	US065100	C. CE. CHP	0.1uF 50V B	
	C4017	US065100	C. CE. CHP	0.1uF 50V B	
	C4018	US035100	C. CE. CHP	0.1uF 16V B	
	C4019	US062100	C. CE. CHP	100pF 50V B	
	C4021	US062100	C. CE. CHP	100pF 50V B	
	C4022	US062470	C. CE. CHP	470pF 50V B	
	C4023	UM388100	C. EL	100uF 6.3V	
	C4024-4025	US035100	C. CE. CHP	0.1uF 16V B	
	C4026	US062220	C. CE. CHP	220pF 50V B	
	C4027	US063100	C. CE. CHP	1000pF 50V B	
	C4028-4030	US035100	C. CE. CHP	0.1uF 16V B	
	C4031	US063100	C. CE. CHP	1000pF 50V B	
	C4032	US035100	C. CE. CHP	0.1uF 16V B	
	C4033-4034	US135100	C. CE. CHP	0.1uF 16V	
	C4081	WH773700	C. EL	470uF 16V	
	C4082	WY034800	C. CE. CHP	0.022uF 50V	
	C4083	WM490200	C. CE. M. CHP	0.47uF 50V	
	C4084	UM416100	C. EL	1uF 50V	
	C4085	UM416220	C. EL	2.2uF 50V	
	C4086	US046100	C. CE. CHP	1uF 25V	
	C4087	WG251600	C. CE. CHP	4.7uF 6.3V	
	C4217	UR237100	C. EL	10uF 16V	
	C4225	UR067100	C. EL	10uF 50V	
	C4226	WK041800	C. EL	10uF 16V	
	C4227-4228	UR237100	C. EL	10uF 16V	
	C4229	WJ608100	C. MYLAR	100pF 100V	
	C4230	WY466700	C. PP	820pF 100V	
	C4234	WK041800	C. EL	10uF 16V	
	C4235-4236	WJ608100	C. MYLAR	100pF 100V	
	C4238	WK041800	C. EL	10uF 16V	
	C4239	US035100	C. CE. CHP	0.1uF 16V B	
	C4240	WY466700	C. PP	820pF 100V	
	C4241	US035100	C. CE. CHP	0.1uF 16V B	

* New Parts

RX-A720

OPERATION

Ref No.	Part No.	Description			Markets
C4242	WK041800	C. EL	10uF	16V	
C4243-4244	WG251600	C. CE. CHP	4. 7uF	6. 3V	
C4245	UR067100	C. EL	10uF	50V	
C4246	UR238100	C. EL	100uF	16V	
C4250	UR067100	C. EL	10uF	50V	
C4251	WK041800	C. EL	10uF	16V	
C4252	UR067100	C. EL	10uF	50V	
C4253	WY466700	C. PP	820pF	100V	
C4255	US062100	C. CE. CHP	100pF	50V B	
C4257	WJ611000	C. MYLAR	0. 047uF	100V	
C4258	UR267100	C. EL	10uF	50V	
C4259-4260	UR067100	C. EL	10uF	50V	
C4261	WJ609900	C. MYLAR	6800pF	100V	
C4262	US126100	C. CE. CHP	1uF	10V	
C4263	US062100	C. CE. CHP	100pF	50V B	
C4264	US126100	C. CE. CHP	1uF	10V	
C4265	UR067100	C. EL	10uF	50V	
C4266	UR257100	C. EL	10uF	35V	
C4267	US126100	C. CE. CHP	1uF	10V	
C4268	WY466700	C. PP	820pF	100V	
C4271	US035100	C. CE. CHP	0. 1uF	16V B	
C4272	WY466700	C. PP	820pF	100V	
C4273	UR257100	C. EL	10uF	35V	
C4274	UR067100	C. EL	10uF	50V	
C4275	US062100	C. CE. CHP	100pF	50V B	
C4276	US063470	C. CE. CHP	4700pF	50V B	
C4277	US062100	C. CE. CHP	100pF	50V B	
C4278	US035100	C. CE. CHP	0. 1uF	16V B	
C4279	UR067100	C. EL	10uF	50V	
C4280	UR257100	C. EL	10uF	35V	
C4281	WY466700	C. PP	820pF	100V	
C4282	UR067470	C. EL	47uF	50V	
C4284	US035100	C. CE. CHP	0. 1uF	16V B	
C4285	UR067470	C. EL	47uF	50V	
C4287	WY466700	C. PP	820pF	100V	
C4288	WK041800	C. EL	10uF	16V	
C4289	UR257100	C. EL	10uF	35V	
C4290	UR067100	C. EL	10uF	50V	
C4291	US062100	C. CE. CHP	100pF	50V B	
C4292	US063470	C. CE. CHP	4700pF	50V B	
C4294	WD758300	C. CE. CHP	10uF	10V	
C4318-4321	WJ610200	C. MYLAR	0. 01uF	100V	
C4401	US063100	C. CE. CHP	1000pF	50V B	
C4402	WJ609500	C. MYLAR	3300pF	100V	
C4403	UR067100	C. EL	10uF	50V	
C4404	US064100	C. CE. CHP	0. 01uF	50V B	
C4405	WJ609500	C. MYLAR	3300pF	100V	
C4406	WV360900	C. EL	22uF	16V	
C4407	US064100	C. CE. CHP	0. 01uF	50V B	
C4408	US063100	C. CE. CHP	1000pF	50V B	
C4409	US062100	C. CE. CHP	100pF	50V B	
C4410	UM387470	C. EL	47uF	16V	
C4411	US061330	C. CE. CHP	33pF	50V B	
C4414-4415	WV360900	C. EL	22uF	16V	
C4416	UM397100	C. EL	10uF	16V	
C4417-4419	US063100	C. CE. CHP	1000pF	50V B	
C4420	US135100	C. CE. CHP	0. 1uF	16V	

✻ New Parts

Ref No.	Part No.	Description			Markets
C4421	US035100	C. CE. CHP	0. 1uF	16V B	
C4424	US061470	C. CE. CHP	47pF	50V B	
C4481	US063100	C. CE. CHP	1000pF	50V B	
C4482	US062100	C. CE. CHP	100pF	50V B	
C4483-4484	US163100	C. CE. CHP	1000pF	50V	
C4487	WD758300	C. CE. CHP	10uF	10V	
C4488	US061470	C. CE. CHP	47pF	50V B	
C4901	US135100	C. CE. CHP	0. 1uF	16V	A
D4003-4004	WY163000	DIODE. ZENR	UDZV4. 3B		
D4005	V2598200	LED	SIR-505ST		
D4006	WP080300	LED. BLUE	Blue SLR343BC4T3F		
D4007-4008	VT332900	DIODE	1SS355		
D4081-4085	VT332900	DIODE	1SS355		
D4086	WY165200	DIODE. ZENR	UDZV36B		
D4203-4205	VT332900	DIODE	1SS355		
D4303	VT332900	DIODE	1SS355		
D4401-4404	VT332900	DIODE	1SS355		
D4406	WY163200	DIODE. ZENR	UDZV5. 1B		
D4407	WR095700	LED	8224-10SDRD/S530A3		
D4408-4409	VT332900	DIODE	1SS355		
D4901-4903	VT332900	DIODE	1SS355		UC
IC401	X6386A00	IC	M66003-0131FP		
IC451-454	X8136A00	IC	LM833MX		
IC455	YD360A00	IC	NJM2505A VIDEO AMP		
IC456	X9870A00	IC	PCM1681PWPR		
IC457	X4928A00	IC	KIA7805API 5V		
IC471	X7378A00	IC	NJM4565M(TE1)		
IC481	YC288A00	IC	RP130Q331D-TR-F		
IC491	YA381A00	IC	LM19CIZ/LF THERMAL		A
JK471	WC814400	JACK. MNI	JY-3554-01-130		
JK472	WZ975700	JACK. PHONE	MSJ-064-05B-B-RF		
PJ471	WZ631700	JACK. PIN	1P MTJ-032-21B-NI		
Q4001-4009	WC529400	TR	KTC3875S Y GR RTK		
Q4010	WC397700	TR	2N5401C-AT		
Q4011	VV655400	TR. DGT	DTC114EKA		
Q4081	WQ381000	FET	MCH6336-TL-E		
Q4082	VV655400	TR. DGT	DTC114EKA		
Q4083-4084	WW223000	TR	2SC5964-TD-E		
Q4085	WC397700	TR	2N5401C-AT		
Q4301	VV655400	TR. DGT	DTC114EKA		
Q4302	VV655000	TR. DGT	DTA114EKA		
Q4401	WC529400	TR	KTC3875S Y GR RTK		
R4225	WW965300	R. MTL. OXD	2. 2Ω	1/4W	
R4293	V8070500	R. MTL. FLM	22Ω	1W	
R4320-4321	WW974100	R. MTL. OXD	10KΩ	1/4W	
R4331-4332	V8070100	R. MTL. FLM	2. 2Ω	1W	
R4407-4408	V8071400	R. MTL. FLM	560Ω	1W	
RY461	WJ122400	RELAY	981-2A-24DS-SP7		
SW402	WD483100	SW. TACT	SKRGAAD010		
SW419	V9597100	SW. RT. ENC	EC12E2460802		
SW422	WD483100	SW. TACT	SKRGAAD010		
SW424-440	WD483100	SW. TACT	SKRGAAD010		
SW472	WQ291600	SW. RT. ENC	XREB12105PVB25FINA		
SW473	WD483100	SW. TACT	SKRGAAD010		
TE461	WW728900	TERM. SP	4P		
TH491-492	WT698300	THERMISTOR	WC92NA103J1		UC
U4001	WQ600700	L. DTCT	SM3385VMH6		

✻ New Parts

RX-A720

OPERATION

	Ref No.	Part No.	Description		Markets
	V4001	WW890600	FL. DSPLY	HNA-18MM03T	
*		ZA889400	SPACER	4. 3x8x30	

✻ New Parts

RX-V673/HTR-6065 RX-A720

MAIN

	Ref No.	Part No.	Description			Markets
*		WZ886500	P. C. B.	MAIN		UCRTKALSH
*		WZ886600	P. C. B.	MAIN		B
*		WZ886700	P. C. B.	MAIN		GF
	CB152	VQ962900	CN. BS. PIN	8P		
	CB153	VQ963900	CN. BS. PIN	18P		
	CB154	VQ963600	CN. BS. PIN	15P		
	CB155	VQ963200	CN. BS. PIN	11P		
	C1001	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1001	WK041800	C. EL	10uF	16V	BGF
	C1002	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1002	WK041800	C. EL	10uF	16V	BGF
	C1003	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1003	WK041800	C. EL	10uF	16V	BGF
	C1004	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1004	UU237100	C. EL	10uF	16V	BGF
	C1005	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1005	UU237100	C. EL	10uF	16V	BGF
	C1006	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1006	UU237100	C. EL	10uF	16V	BGF
	C1007	UR257100	C. EL	10uF	35V	UCRTKALSH
	C1007	UU237100	C. EL	10uF	16V	BGF
	C1008	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1008	WE100900	C. PP	220pF	630V K	BGF
	C1009	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1009	WE100900	C. PP	220pF	630V K	BGF
	C1010	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1010	WE100900	C. PP	220pF	630V K	BGF
	C1011	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1011	WJ608300	C. MYLAR	220pF	100V	BGF
	C1012	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1012	WJ608300	C. MYLAR	220pF	100V	BGF
	C1013	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1013	WJ608300	C. MYLAR	220pF	100V	BGF
	C1014	WN164200	C. PP	220pF	100V	UCRTKALSH
	C1014	WJ608300	C. MYLAR	220pF	100V	BGF
	C1015	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1015	WE100600	C. PP	120pF	630V K	BGF
	C1016	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1016	WE100600	C. PP	120pF	630V K	BGF
	C1017	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1017	WE100600	C. PP	120pF	630V K	BGF
	C1018	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1018	WW179700	C. MYLAR	120pF	100V	BGF
	C1019	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1019	WW179700	C. MYLAR	120pF	100V	BGF
	C1020	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1020	WW179700	C. MYLAR	120pF	100V	BGF
	C1021	WQ107500	C. PP	120pF	100V	UCRTKALSH
	C1021	WW179700	C. MYLAR	120pF	100V	BGF
	C1022	WN164900	C. PP	3300pF	100V	UCRTKALSH
	C1022	WE102300	C. PP	3300pF	100V J	BGF
	C1023	WN164900	C. PP	3300pF	100V	UCRTKALSH
	C1023	WE102300	C. PP	3300pF	100V J	BGF
	C1024	WN164900	C. PP	3300pF	100V	UCRTKALSH
	C1024	WE102300	C. PP	3300pF	100V J	BGF
	C1025	WN164900	C. PP	3300pF	100V	UCRTKALSH
	C1025	WJ609500	C. MYLAR	3300pF	100V	BGF

✻ New Parts

RX-V673/HTR-6065 | **RX-A720**

MAIN

Ref No.	Part No.	Description			Markets
C1026	WN164900	C. PP	3300pF	100V	UCRTKALSH
C1026	WJ609500	C. MYLAR	3300pF	100V	BGF
C1027	WN164900	C. PP	3300pF	100V	UCRTKALSH
C1027	WJ609500	C. MYLAR	3300pF	100V	BGF
C1028	WN164900	C. PP	3300pF	100V	UCRTKALSH
C1028	WJ609500	C. MYLAR	3300pF	100V	BGF
C1029	UR067470	C. EL	47uF	50V	
C1030-1031	UR068100	C. EL	100uF	50V	
C1032-1035	UR067470	C. EL	47uF	50V	
C1036	WQ627600	C. CE	22pF	500V	UCRTKALSH
C1036	WE100200	C. PP	22pF	630V K	BGF
C1037	WQ627600	C. CE	22pF	500V	UCRTKALSH
C1037	WE100200	C. PP	22pF	630V K	BGF
C1038	WQ627600	C. CE	22pF	500V	UCRTKALSH
C1038	WE100200	C. PP	22pF	630V K	BGF
C1039-1042	WQ627600	C. CE	22pF	500V	
C1043	WJ608400	C. MYLAR	330pF	100V	UCRTKALSH
C1043	WE101100	C. PP	330pF	100V J	BGF
C1044	WJ608400	C. MYLAR	330pF	100V	UCRTKALSH
C1044	WE101100	C. PP	330pF	100V J	BGF
C1045	WJ608400	C. MYLAR	330pF	100V	UCRTKALSH
C1045	WE101100	C. PP	330pF	100V J	BGF
C1046-1049	WJ608400	C. MYLAR	330pF	100V	
C1050-1056	UR067100	C. EL	10uF	50V	
C1057-1063	WJ610600	C. MYLAR	0.022uF	100V	
C1066-1067	WN156000	C. PP	1000pF	250V	
C1068	UR866470	C. EL	4.7uF	50V	
C1069	UR828220	C. EL	220uF	10V	
C1070-1073	UR297100	C. EL	10uF	100V	
C1074	UR267330	C. EL	33uF	50V	
C1075	UR257100	C. EL	10uF	35V	UCRTKALSH
C1075	UR067470	C. EL	47uF	50V	BGF
C1076	UR266100	C. EL	1uF	50V	
C1078	WJ611400	C. MYLAR	0.1uF	100V J	UCRTKALSH
C1078	WP421000	C. PP	0.047uF	100V	BGF
C1079	WJ611400	C. MYLAR	0.1uF	100V J	UCRTKALSH
C1079	WP421000	C. PP	0.047uF	100V	BGF
C1080	WN165500	C. PP	0.022uF	100V	UCRTKALSH
C1080	WJ610600	C. MYLAR	0.022uF	100V	BGF
C1081	WN165500	C. PP	0.022uF	100V	UCRTKALSH
C1081	WJ610600	C. MYLAR	0.022uF	100V	BGF
⚠ C1082	UR049330	C. EL	3300uF	25V	
⚠ C1083	UR049220	C. EL	2200uF	25V	
⚠ C1084-1085	WN331300	C. EL	6800uF	71V	
C1086	UR049220	C. EL	2200uF	25V	
C1087	UR237100	C. EL	10uF	16V	UCRTKALSH
C1087	WK041800	C. EL	10uF	16V	BGF
C1088	UR237100	C. EL	10uF	16V	UCRTKALSH
C1088	WK041800	C. EL	10uF	16V	BGF
C1509	UR067470	C. EL	47uF	50V	UCRTKALSH
C1509	UR238100	C. EL	100uF	16V	BGF
C1510-1512	US035100	C. CE. CHP	0.1uF	16V B	
C1513-1514	US061220	C. CE. CHP	22pF	50V B	
C1515-1516	US035100	C. CE. CHP	0.1uF	16V B	
C1517-1520	US062220	C. CE. CHP	220pF	50V B	
C1521	UR267100	C. EL	10uF	50V	
C1522	US061470	C. CE. CHP	47pF	50V B	

✻ New Parts

Ref No.	Part No.	Description			Markets
C1523	UR238100	C. EL	100uF	16V	
C1524	US061470	C. CE. CHP	47pF	50V B	
C1525	UR267100	C. EL	10uF	50V	
C1526-1527	UR238100	C. EL	100uF	16V	
C1528-1529	US062220	C. CE. CHP	220pF	50V B	
C1530	UR238100	C. EL	100uF	16V	
C1531	UR267330	C. EL	33uF	50V	
C1532-1533	UR238100	C. EL	100uF	16V	
C1534-1535	US062220	C. CE. CHP	220pF	50V B	
C1536	UR238100	C. EL	100uF	16V	
C1542	US035100	C. CE. CHP	0.1uF	16V B	
C1545	US035100	C. CE. CHP	0.1uF	16V B	
C1547	UR267100	C. EL	10uF	50V	
C1549	UR267100	C. EL	10uF	50V	
C1553-1554	UR267220	C. EL	22uF	50V	
C1556	UR267100	C. EL	10uF	50V	
C1558	UR267470	C. EL	47uF	50V	UCRTKALSH
C1558	UR067470	C. EL	47uF	50V	BGF
C1559	UR267470	C. EL	47uF	50V	UCRTKALSH
C1559	UR067470	C. EL	47uF	50V	BGF
C1571	UR267100	C. EL	10uF	50V	
C1572-1573	US062100	C. CE. CHP	100pF	50V B	
C1574	UR267100	C. EL	10uF	50V	
C1575	US061470	C. CE. CHP	47pF	50V B	
C1576	UR267100	C. EL	10uF	50V	
C1578	US061470	C. CE. CHP	47pF	50V B	
C1579	UR267100	C. EL	10uF	50V	
C1580	UR837100	C. EL	10uF	16V	
C1581-1582	US061470	C. CE. CHP	47pF	50V B	
C1583-1584	UR267470	C. EL	47uF	50V	
C1585	UR837100	C. EL	10uF	16V	
C1589-1590	UR267100	C. EL	10uF	50V	
C1600-1601	UR267100	C. EL	10uF	50V	
C1605	US064100	C. CE. CHP	0.01uF	50V B	
C1608	US044220	C. CE. CHP	0.022uF	25V B	
C1610	US064100	C. CE. CHP	0.01uF	50V B	
C1612-1613	US064100	C. CE. CHP	0.01uF	50V B	
D1001-1016	VT332900	DIODE	1SS355		
⚠ D1017-1023	VG437500	DIODE. ZENR	MTZJ5.1C	5.1V	
D1024-1039	VT332900	DIODE	1SS355		
D1040	WB212700	DIODE. BRG	RS603M 6A 200V		UCRTKALSH
⚠ D1040	WK611100	DIODE. BRG	D6SBN20 6A 200V		BGF
⚠ D1041	WH487300	DIODE. BRG	RS203M 2.0A 200V		
D1042	VG440500	DIODE. ZENR	MTZJ13B	13V	
D1043	VT332900	DIODE	1SS355		
D1501-1502	VG438400	DIODE. ZENR	MTZJ6.8C	6.8V	
G101	V5995800	PLATE. GND			
⚠ IC101	XJ608A00	IC	NJM7812FA		
⚠ IC102	X4154A00	IC	KIA7912PI		
IC152	XZ509A00	IC	TC74VHCU04FT INVER		
IC153	YA361B00	IC	R2A15220FP		
IC154	X7378A00	IC	NJM4565M(TE1)		
PJ150	V9420700	JACK. PIN	2P MSP-252V1-30NI		
PJ151	V7046800	JACK. PIN	6P MSP-246V1-01NI		
PJ152	V7046700	JACK. PIN	4P MSP-244V1-01NI		
PJ155	V7046700	JACK. PIN	4P MSP-244V1-01NI		
PJ159	V9392100	JACK. PIN	MSP-242V1-02NIFELF		

✻ New Parts

RX-V673/HTR-6065 | **RX-A720**

MAIN

	Ref No.	Part No.	Description		Markets
	Q1001-1014	WF549900	TR	2SC3906K T146 R, S	
	Q1015-1021	V3966800	TR	2SA949 O, Y	
⚠	Q1022-1028	WT676000	TR	2SD2705S	
⚠	Q1029-1035	VR325600	TR	2SC2229 O, Y	
⚠	Q1036-1042	V4096100	TR	2SC4614 S, T	
⚠	Q1043-1049	V4096000	TR	2SA1770 S, T	
⚠	Q1050-1056	VR355900	TR. PAIR	A1695/C4468 OPY	
	Q1057-1063	V7421700	TR. CHP	2SC3324-GR, BL	
	Q1064	V7421800	TR	2SA1312-GR, BL	
	Q1065	V7421700	TR. CHP	2SC3324-GR, BL	
⚠	Q1067-1068	WC292600	TR	KTA1837-U	
⚠	Q1069-1070	WC398400	TR	2N5551C-AT	
⚠	Q1071	WC397700	TR	2N5401C-AT	
⚠	Q1072	VP872600	TR	2SA1708 S, T	
	Q1073	WC398500	TR. DGT	KRA102M-AT	
	Q1074	WC529200	TR. DGT	KRC102M-AT	
	Q1501-1502	WC883400	TR	2SD2704 K	
	Q1504	WC883400	TR	2SD2704 K	
	Q1507	WC883400	TR	2SD2704 K	
	Q1509	WC883400	TR	2SD2704 K	
	Q1511-1514	WC883400	TR	2SD2704 K	
	Q1520-1521	WC883400	TR	2SD2704 K	
	Q1524-1525	WC883400	TR	2SD2704 K	
	Q1527	WC883400	TR	2SD2704 K	
	R1001-1007	HF356100	R. CAR	1KΩ 1/2W	
	R1008-1014	HF356180	R. CAR	1.8KΩ 1/2W	
	R1022-1028	HF355330	R. CAR	330Ω 1/2W	
	R1029-1035	HL006120	R. MTL. OXD	1.2KΩ 1/2W	
	R1036-1042	V8070900	R. MTL. FLM	100Ω 1W	
	R1043-1049	V8072600	R. MTL. OXD	33KΩ 1W	
	R1079-1085	HL005120	R. MTL. OXD	120Ω 1/2W	
	R1086-1092	WG727400	R. MTL. FLM	2.7KΩ 1/4W	
	R1093-1099	WG725600	R. MTL. FLM	470Ω 1/4W	
	R1100-1106	WG726400	R. MTL. FLM	1KΩ 1/4W	
	R1107-1112	WG726200	R. MTL. FLM	820Ω 1/4W	
⚠	R1113-1118	WC862200	R. MTL. FLM	120Ω 1W	
⚠	R1119-1126	HL005120	R. MTL. OXD	120Ω 1/2W	
	R1127-1133	HF355470	R. CAR	470Ω 1/2W	
⚠	R1134-1147	HL004100	R. MTL. OXD	10Ω 1/2W	
⚠	R1148-1154	WP839400	R. CEMENT	0.22+0.22 3W	
⚠	R1176-1182	V8070300	R. MTL. FLM	10Ω 1W	
⚠	R1197-1198	V8070200	R. MTL. FLM	4.7Ω 1W	
⚠	R1211	WW966900	R. MTL. OXD	10Ω 1/4W	
	R1213	V8072100	R. MTL. OXD	5.6KΩ 1W	
	R1214	WW971100	R. MTL. OXD	560Ω 1/4W	
	R1219	V8072000	R. MTL. OXD	4.7KΩ 1W	
⚠	R1222	V8071600	R. MTL. FLM	1KΩ 1W	
	R1236	WG726200	R. MTL. FLM	820Ω 1/4W	
⚠	R1238	WC860900	R. MTL. FLM	10Ω 1W	
	R1504	WC860100	R. MTL. FLM	2.2Ω 1W	
	R1573	WA621400	R. MTL. OXD	82Ω 1W J	UCRTKALSH
	R1573	WQ835700	R. MTL. OXD	82Ω 1W	BGF
	R1575	WA621400	R. MTL. OXD	82Ω 1W J	UCRTKALSH
	R1575	WQ835700	R. MTL. OXD	82Ω 1W	BGF
	R1664-1665	WC862000	R. MTL. FLM	82Ω 1W	
⚠	RY101	WE648700	RELAY	DC DH24D2-0-Q	
	U1500-1501	WH169900	CN. PHOTO. R	1P GP1FAV51RK0F	

✻ New Parts

Ref No.	Part No.	Description		Markets
	WE774200	SCR. BND. HD	3x10 MFZN2W3	

✻ New Parts

RX-V673/HTR-6065

VIDEO

	Ref No.	Part No.	Description	Markets
*		ZC104600	P. C. B. VIDEO	U
*		ZC104700	P. C. B. VIDEO	C
*		ZC104800	P. C. B. VIDEO	RS
*		ZC104900	P. C. B. VIDEO	T
*		ZC105000	P. C. B. VIDEO	K
*		ZC105100	P. C. B. VIDEO	A
*		ZC105200	P. C. B. VIDEO	BGF
*		ZC105300	P. C. B. VIDEO	LH
	CB302	VQ961200	CN. BS. PIN 9P	
	CB303	VM859700	CN. BS. PIN 16P	
	CB323	VQ047200	CN. BS. PIN 9P	
	CB324	VQ047500	CN. BS. PIN 20P	
	CB340	LB918020	CN. BS. PIN 2P	
	CB342	VL844800	CN. BS. PIN 4P	
	CB343	VZ130900	CN. JUMPER 4P	
	CB344	VQ585500	CN. JUMPER 5P	
	CB346	VB390000	CN. BS. PIN 4P	
	CB371	VG879900	CN. BS. PIN 2P	
	CB372-373	WN103000	CLIP. FUSE TP00351-31	
	CB374	VG879900	CN. BS. PIN 2P	RS
	CB376	VQ961400	CN. BS. PIN 11P	
	CB377	VQ963200	CN. BS. PIN 11P	
	CB381-382	WN103000	CLIP. FUSE TP00351-31	RS
	C3001	US062100	C. CE. CHP 100pF 50V B	
	C3002-3004	US060800	C. CE. CHP 8pF 50V B	
	C3005	US062100	C. CE. CHP 100pF 50V B	
	C3006	UR237470	C. EL 47uF 16V	
	C3007-3008	US135100	C. CE. CHP 0. 1uF 16V	
	C3009	UR237470	C. EL 47uF 16V	
	C3011	US060300	C. CE. CHP 3pF 50V B	
	C3012	UR837470	C. EL 47uF 16V	
	C3013-3014	US060300	C. CE. CHP 3pF 50V B	
	C3016-3017	US135100	C. CE. CHP 0. 1uF 16V	
	C3018	UR267100	C. EL 10uF 50V	
	C3019	US135100	C. CE. CHP 0. 1uF 16V	
	C3020	UR267100	C. EL 10uF 50V	
	C3021	US135100	C. CE. CHP 0. 1uF 16V	
	C3023-3025	US135100	C. CE. CHP 0. 1uF 16V	
	C3026	UR267100	C. EL 10uF 50V	
	C3027	WD758300	C. CE. CHP 10uF 10V	
	C3028	US064100	C. CE. CHP 0. 01uF 50V B	
	C3029	WD758300	C. CE. CHP 10uF 10V	
	C3031	WD758300	C. CE. CHP 10uF 10V	
	C3033	UR837470	C. EL 47uF 16V	
	C3043-3044	US135100	C. CE. CHP 0. 1uF 16V	
	C3045	UR837470	C. EL 47uF 16V	
	C3047	US135100	C. CE. CHP 0. 1uF 16V	
	C3048	UR238220	C. EL 220uF 16V	
	C3050	US135100	C. CE. CHP 0. 1uF 16V	
	C3051	UR238220	C. EL 220uF 16V	
	C3063	US135100	C. CE. CHP 0. 1uF 16V	
	C3065	UR237470	C. EL 47uF 16V	
	C3067	US135100	C. CE. CHP 0. 1uF 16V	
	C3072	US135100	C. CE. CHP 0. 1uF 16V	
	C3073	UR237470	C. EL 47uF 16V	
	C3080-3085	WD758300	C. CE. CHP 10uF 10V	
	C3100	US135100	C. CE. CHP 0. 1uF 16V	

	Ref No.	Part No.	Description	Markets
	C3201	US135100	C. CE. CHP 0. 1uF 16V	
	C3217	US062100	C. CE. CHP 100pF 50V B	
	C3221	US062100	C. CE. CHP 100pF 50V B	
	C3303-3304	WJ611400	C. MYLAR 0. 1uF 100V J	
	C3309-3310	WG601700	C. EL 4700uF 16V	
	C3311-3312	UR866100	C. EL 1uF 50V	
	C3314	UR266100	C. EL 1uF 50V	
	C3319	UR266100	C. EL 1uF 50V	
	C3320-3321	UR267330	C. EL 33uF 50V	
	C3403-3409	WJ610200	C. MYLAR 0. 01uF 100V	
	C3410-3416	WJ610400	C. MYLAR 0. 015uF 100V	
	C3603-3604	US063100	C. CE. CHP 1000pF 50V B	
	C3606	US064100	C. CE. CHP 0. 01uF 50V B	
	C3701	WJ361200	C. POL. MTL 0. 047uF 400V	UC
⚠	C3701	WJ361800	C. POL. MTL 0. 022uF 630V	RTKABGFLSH
⚠	C3702-3703	WQ902300	C. CE. SAFTY 1000pF 250V	
⚠	C3704	V5877700	C. MYLAR 0. 22uF 250V	
⚠	C3705	WJ609900	C. MYLAR 6800pF 100V	
⚠	C3706	WW766000	C. EL 220uF 220V	UC
⚠ *	C3706	WW766100	C. EL 150uF 400V	RS
⚠	C3706	WQ852500	C. EL 68uF 400V	TKABGFLH
⚠	C3707	WQ939400	C. CE. SAFTY 0. 01uF 250V	
⚠	C3708	UR867220	C. EL 22uF 50V	
⚠	C3710	WR246900	C. CE. CHP 3300pF 250V	
⚠	C3711	WY685500	C. CE. SAFTY 3300pF 250V	
⚠	C3712	WJ361200	C. POL. MTL 0. 047uF 400V	UC
⚠	C3712	WJ361800	C. POL. MTL 0. 022uF 630V	RTKABGFLSH
	C3713	WJ322300	C. CE. M. CHP 1000pF 630V	
	C3714-3715	WH776400	C. EL 2200uF 25V	
	C3716	US034470	C. CE. CHP 0. 047uF 16V B	
	C3718	WH771600	C. EL 220uF 10V	
	C3719	US064100	C. CE. CHP 0. 01uF 50V B	
	C3720	V7887800	C. EL 1uF 50V	
	C3721	WJ335500	C. EL 2. 2uF 50V	
	C3722	US135100	C. CE. CHP 0. 1uF 16V	
	C3723	US064100	C. CE. CHP 0. 01uF 50V B	
	C3724	US135100	C. CE. CHP 0. 1uF 16V	
	C3725	WJ608900	C. MYLAR 1000pF 100V	
⚠	D3304	WH487300	DIODE. BRG RS203M 2. 0A 200V	
	D3310	VT332900	DIODE 1SS355	
	D3350	VU172800	DIODE. ZENR UDZS12B 12V	RS
	D3403-3407	VT332900	DIODE 1SS355	
	D3601-3602	VT332900	DIODE 1SS355	
⚠	D3701	WW872000	DIODE. BRG DBL155G 1. 5A 600	
⚠	D3702	WE665600	DIODE RF101L2STE25	
⚠	D3703	WW170700	DIODE SARS05	
	D3704	WW745500	DIODE. SCHOTTKY RB215T-90 20A 90V	
⚠	D3706-3715	VT332900	DIODE 1SS355	
⚠	F3701	WR944000	FUSE 2A 250V	
⚠	F3702	WQ211100	FUSE 8A 125V	UCRS
⚠	F3702	WM933100	FUSE T5A 250V	TKABGFLH
⚠	F3801	KB000780	FUSE T5A 250V	RS
	IC302-303	XY879A00	IC TC74HC4053AF(EL)	
	IC305-306	X2904A00	IC NJM2581M VIDEO AMP	
	IC307	XY549A00	IC TC74HC4051AFEL	
	IC310	X8875A00	IC FHP3350IM14X	
	IC333	X4928A00	IC KIA7805API 5V	

* New Parts

* New Parts

RX-V673/HTR-6065

VIDEO

	Ref No.	Part No.	Description		Markets
	IC334	X6143A00	IC	NJM2388F05 5.0V	
⚠	IC371	YD188A00	IC	STR2A153	
⚠	IC372	WP388200	PHOT. CPL	TLP781(D4-GR,F)	
⚠	IC373	YA276A00	IC	TL431AC 2.5-36V	
⚠	IC374	WP388200	PHOT. CPL	TLP781(D4-GR,F)	
	IC392	XV495B00	IC	TC74VHCT08AF E,K,F	
	JK321	V9435700	JACK. MINI	MSJ-035-12APC	
	JK361-362	V9435700	JACK. MINI	MSJ-035-12APC	
	PJ301	WG505100	JACK. PIN	6P	
	PJ302	V7189800	JACK. PIN	1P	
	PJ303	WH381400	JACK. PIN	3P JACK G,B,R	
	PJ304	V7189800	JACK. PIN	1P	
	PJ305-306	V7190000	JACK. PIN	2P	
	Q3001	VR936300	TR	2SA1576A T106	
	Q3100	VV655400	TR. DGT	DTC114EKA	
	Q3204	WC397700	TR	2N5401C-AT	
	Q3205	WC398400	TR	2N5551C-AT	
	Q3206	ZA348800	TR	KTA1046-Y-U/PFY	
	Q3207	WC398400	TR	2N5551C-AT	
	Q3302	WC397700	TR	2N5401C-AT	
	Q3303	ZA348800	TR	KTA1046-Y-U/PFY	
⚠	Q3304	WC397700	TR	2N5401C-AT	
	Q3305	WC398400	TR	2N5551C-AT	
	Q3306	WC529500	TR	KTA1504S Y GR RTK	
	Q3405	VV655400	TR. DGT	DTC114EKA	
	Q3406	VV655000	TR. DGT	DTA114EKA	
	Q3407	VV655400	TR. DGT	DTC114EKA	
	Q3408	VV655000	TR. DGT	DTA114EKA	
	Q3409	VV655400	TR. DGT	DTC114EKA	
	Q3410	VV655000	TR. DGT	DTA114EKA	
	Q3411	VV655400	TR. DGT	DTC114EKA	
	Q3412	VV655000	TR. DGT	DTA114EKA	
	Q3413	VV655400	TR. DGT	DTC114EKA	
	Q3414	VV655000	TR. DGT	DTA114EKA	
	Q3701-3702	VQ986700	TR	2SC4081 T106	
	Q3703	VV655700	TR. DGT	DTC144EKA	
	R3021	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3025	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3046-3049	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3060-3061	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3213	WW966300	R. MTL. OXD	5.6Ω 1/4W	
	R3304	HL002220	R. MTL. OXD	0.22Ω 1/2W	
	R3315-3316	WW973300	R. MTL. OXD	4.7KΩ 1/4W	
	R3350	WW972500	R. MTL. OXD	2.2KΩ 1/4W	RS
	R3403-3406	WW974100	R. MTL. OXD	10KΩ 1/4W	
⚠	R3703	WU547900	R. ANTI. SURGE	3MΩ 1/2W	
	RY341-345	WJ122400	RELAY	981-2A-24DS-SP7	
⚠	RY371	WQ804100	RELAY	DC DLS5D1-O(M)0.25	
⚠	SW381	WV382900	SW. SLIDE	SL14	RS
⚠	T3701	YD325A00	TRANS. SUB		
	TE341	WW728900	TERM. SP	4P	UCRSTA
	TE341	WW726500	TERM. SP	4P	KBGFLH
	TE342	WW726600	TERM. SP	6P	UCRSTA
	TE342	WW728800	TERM. SP	6P	KBGFLH
	TE343	WW728900	TERM. SP	4P	UCRSTA
	TE343	WW726500	TERM. SP	4P	KBGFLH
⚠	TH371	WF544600	PTC. THERMISTOR	NTPAD5R1LDNB0 5.1	

✻ New Parts

Ref No.	Part No.	Description		Markets
	WE774200	SCR. BND. HD	3x10 MFZN2W3	

✻ New Parts

RX-A720

VIDEO

	Ref No.	Part No.	Description			Markets
*		ZC105400	P. C. B.	VIDEO		U
*		ZC105500	P. C. B.	VIDEO		C
*		ZC105600	P. C. B.	VIDEO		A
	CB302	VQ961200	CN. BS. PIN	9P		
	CB303	VM859700	CN. BS. PIN	16P		
	CB323	VQ047200	CN. BS. PIN	9P		
	CB324	VQ047500	CN. BS. PIN	20P		
	CB340	LB918020	CN. BS. PIN	2P		
	CB342	VL844800	CN. BS. PIN	4P		
	CB343	VZ130900	CN. JUMPER	4P		
	CB344	VQ585500	CN. JUMPER	5P		
	CB346	VB390000	CN. BS. PIN	4P		
	CB371	VG879900	CN. BS. PIN	2P		
	CB372-373	WN103000	CLIP. FUSE	TP00351-31		
	CB376	VQ961400	CN. BS. PIN	11P		
	CB377	VQ963200	CN. BS. PIN	11P		
	C3001	US062100	C. CE. CHP	100pF	50V B	
	C3002-3004	US060800	C. CE. CHP	8pF	50V B	
	C3005	US062100	C. CE. CHP	100pF	50V B	
	C3006	UR237470	C. EL	47uF	16V	
	C3007-3008	US135100	C. CE. CHP	0. 1uF	16V	
	C3009	UR237470	C. EL	47uF	16V	
	C3011	US060300	C. CE. CHP	3pF	50V B	
	C3012	UR837470	C. EL	47uF	16V	
	C3013-3014	US060300	C. CE. CHP	3pF	50V B	
	C3016-3017	US135100	C. CE. CHP	0. 1uF	16V	
	C3018	UR267100	C. EL	10uF	50V	
	C3019	US135100	C. CE. CHP	0. 1uF	16V	
	C3020	UR267100	C. EL	10uF	50V	
	C3021	US135100	C. CE. CHP	0. 1uF	16V	
	C3023-3025	US135100	C. CE. CHP	0. 1uF	16V	
	C3026	UR267100	C. EL	10uF	50V	
	C3027	WD758300	C. CE. CHP	10uF	10V	
	C3028	US064100	C. CE. CHP	0. 01uF	50V B	
	C3029	WD758300	C. CE. CHP	10uF	10V	
	C3031	WD758300	C. CE. CHP	10uF	10V	
	C3033	UR837470	C. EL	47uF	16V	
	C3043-3044	US135100	C. CE. CHP	0. 1uF	16V	
	C3045	UR837470	C. EL	47uF	16V	
	C3047	US135100	C. CE. CHP	0. 1uF	16V	
	C3048	UR238220	C. EL	220uF	16V	
	C3050	US135100	C. CE. CHP	0. 1uF	16V	
	C3051	UR238220	C. EL	220uF	16V	
	C3063	US135100	C. CE. CHP	0. 1uF	16V	
	C3065	UR237470	C. EL	47uF	16V	
	C3067	US135100	C. CE. CHP	0. 1uF	16V	
	C3072	US135100	C. CE. CHP	0. 1uF	16V	
	C3073	UR237470	C. EL	47uF	16V	
	C3080-3085	WD758300	C. CE. CHP	10uF	10V	
	C3100	US135100	C. CE. CHP	0. 1uF	16V	
	C3201	US135100	C. CE. CHP	0. 1uF	16V	
	C3217	US062100	C. CE. CHP	100pF	50V B	
	C3221	US062100	C. CE. CHP	100pF	50V B	
	C3303-3304	WJ611400	C. MYLAR	0. 1uF	100V J	
	C3309-3310	WG601700	C. EL	4700uF	16V	
	C3311-3312	UR866100	C. EL	1uF	50V	
	C3314	UR266100	C. EL	1uF	50V	

	Ref No.	Part No.	Description			Markets
	C3319	UR266100	C. EL	1uF	50V	
	C3320-3321	UR267330	C. EL	33uF	50V	
	C3403-3409	WJ610200	C. MYLAR	0. 01uF	100V	
	C3410-3416	WJ610400	C. MYLAR	0. 015uF	100V	
	C3603-3604	US063100	C. CE. CHP	1000pF	50V B	
	C3606	US064100	C. CE. CHP	0. 01uF	50V B	
⚠	C3701	WJ361200	C. POL. MTL	0. 047uF	400V	UC
⚠	C3701	WJ361800	C. POL. MTL	0. 022uF	630V	A
⚠	C3704	V5877700	C. MYLAR	0. 22uF	250V	
⚠	C3705	WJ609900	C. MYLAR	6800pF	100V	
⚠	C3706	WW766000	C. EL	220uF	220V	UC
⚠	C3706	WQ852500	C. EL	68uF	400V	A
⚠	C3707	WQ939400	C. CE. SAFTY	0. 01uF	250V	
⚠	C3708	UR867220	C. EL	22uF	50V	
⚠	C3710	WR246900	C. CE. CHP	3300pF	250V	
⚠	C3711	WY685500	C. CE. SAFTY	3300pF	250V	
⚠	C3712	WJ361200	C. POL. MTL	0. 047uF	400V	UC
⚠	C3712	WJ361800	C. POL. MTL	0. 022uF	630V	A
	C3713	WJ322300	C. CE. M. CHP	1000pF	630V	
	C3714-3715	WH776400	C. EL	2200uF	25V	
	C3716	US034470	C. CE. CHP	0. 047uF	16V B	
	C3718	WH771600	C. EL	220uF	10V	
	C3719	US064100	C. CE. CHP	0. 01uF	50V B	
	C3720	V7887800	C. EL	1uF	50V	
	C3721	WJ335500	C. EL	2. 2uF	50V	
	C3722	US135100	C. CE. CHP	0. 1uF	16V	
	C3723	US064100	C. CE. CHP	0. 01uF	50V B	
	C3724	US135100	C. CE. CHP	0. 1uF	16V	
	C3725	WJ608900	C. MYLAR	1000pF	100V	
⚠	C3732-3733	WQ902300	C. CE. SAFTY	1000pF	250V	
⚠	D3304	WH487300	DIODE. BRG	RS203M 2. 0A 200V		
	D3310	VT332900	DIODE	1SS355		
	D3403-3407	VT332900	DIODE	1SS355		
	D3601-3602	VT332900	DIODE	1SS355		
⚠	D3701	WW872000	DIODE. BRG	DBL155G 1. 5A 600		
⚠	D3702	WE665600	DIODE	RF101L2STE25		
⚠	D3703	WW170700	DIODE	SARS05		
	D3704	WW745500	DIODE. SCHOTTKY	RB215T-90 20A 90V		
⚠	D3706-3715	VT332900	DIODE	1SS355		
⚠	F3701	WR944000	FUSE	2A	250V	
⚠	F3702	WQ211100	FUSE	8A 125V		UC
⚠	F3702	WM933100	FUSE	T5A	250V	A
	IC302-303	XY879A00	IC	TC74HC4053AF(EL)		
	IC305-306	X2904A00	IC	NJM2581M VIDEO AMP		
	IC307	XY549A00	IC	TC74HC4051AFEL		
	IC310	X8875A00	IC	FHP3350IM14X		
	IC333	X4928A00	IC	KIA7805API 5V		
	IC334	X6143A00	IC	NJM2388F05 5. 0V		
⚠	IC371	YD188A00	IC	STR2A153		
⚠	IC372	WP388200	PHOT. CPL	TLP781(D4-GR, F)		
⚠	IC373	YA276A00	IC	TL431AC 2. 5-36V		
⚠	IC374	WP388200	PHOT. CPL	TLP781(D4-GR, F)		
*	IC392	XV495B00	IC	TC74VHCT08AF E, K, F		
	JK321	V9435700	JACK. MINI	MSJ-035-12APC		
	JK361-362	V9435700	JACK. MINI	MSJ-035-12APC		
	PJ301	WG505100	JACK. PIN	6P		
	PJ302	V7189800	JACK. PIN	1P		

* New Parts

* New Parts

RX-A720

VIDEO

	Ref No.	Part No.	Description		Markets
	PJ303	WH381400	JACK. PIN	3P JACK G, B, R	
	PJ304	V7189800	JACK. PIN	1P	
	PJ305-306	V7190000	JACK. PIN	2P	
	Q3001	VR936300	TR	2SA1576A T106	
	Q3100	VV655400	TR. DGT	DTC114EKA	
	Q3204	WC397700	TR	2N5401C-AT	
	Q3205	WC398400	TR	2N5551C-AT	
	Q3206	ZA348800	TR	KTA1046-Y-U/PFY	
	Q3207	WC398400	TR	2N5551C-AT	
	Q3302	WC397700	TR	2N5401C-AT	
	Q3303	ZA348800	TR	KTA1046-Y-U/PFY	
	Q3304	WC397700	TR	2N5401C-AT	
	Q3305	WC398400	TR	2N5551C-AT	
	Q3306	WC529500	TR	KTA1504S Y GR RTK	
	Q3405	VV655400	TR. DGT	DTC114EKA	
	Q3406	VV655000	TR. DGT	DTA114EKA	
	Q3407	VV655400	TR. DGT	DTC114EKA	
	Q3408	VV655000	TR. DGT	DTA114EKA	
	Q3409	VV655400	TR. DGT	DTC114EKA	
	Q3410	VV655000	TR. DGT	DTA114EKA	
	Q3411	VV655400	TR. DGT	DTC114EKA	
	Q3412	VV655000	TR. DGT	DTA114EKA	
	Q3413	VV655400	TR. DGT	DTC114EKA	
	Q3414	VV655000	TR. DGT	DTA114EKA	
	Q3701-3702	VQ986700	TR	2SC4081 T106	
	Q3703	VV655700	TR. DGT	DTC144EKA	
	R3021	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3025	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3046-3049	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3060-3061	WW964500	R. MTL. OXD	1Ω 1/4W	
	R3213	WW966300	R. MTL. OXD	5.6Ω 1/4W	
⚠	R3304	HL002220	R. MTL. OXD	0.22Ω 1/2W	
	R3315-3316	WW973300	R. MTL. OXD	4.7KΩ 1/4W	
	R3403-3406	WW974100	R. MTL. OXD	10KΩ 1/4W	
⚠	R3703	WU547900	R. ANTI. SURGE	3MΩ 1/2W	
	RY341-345	WJ122400	RELAY	981-2A-24DS-SP7	
⚠	RY371	WQ804100	RELAY	DC DLS5D1-O(M)0.25	
⚠	T3701	YD325A00	TRANS. SUB		
	TE341	WW728900	TERM. SP	4P	
	TE342	WW726600	TERM. SP	6P	
	TE343	WW728900	TERM. SP	4P	
⚠	TE371	ZD538700	INLET. AC	R-30190(26)	
⚠	TH371	WF544600	PTC. THERMISTOR	NTPAD5R1LDNB0 5.1	
		WE774200	SCR. BND. HD	3x10 MFZN2W3	

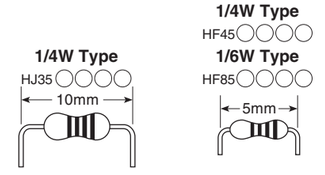
✻ New Parts

Ref No.	Part No.	Description		Markets

✻ New Parts

Carbon Resistors

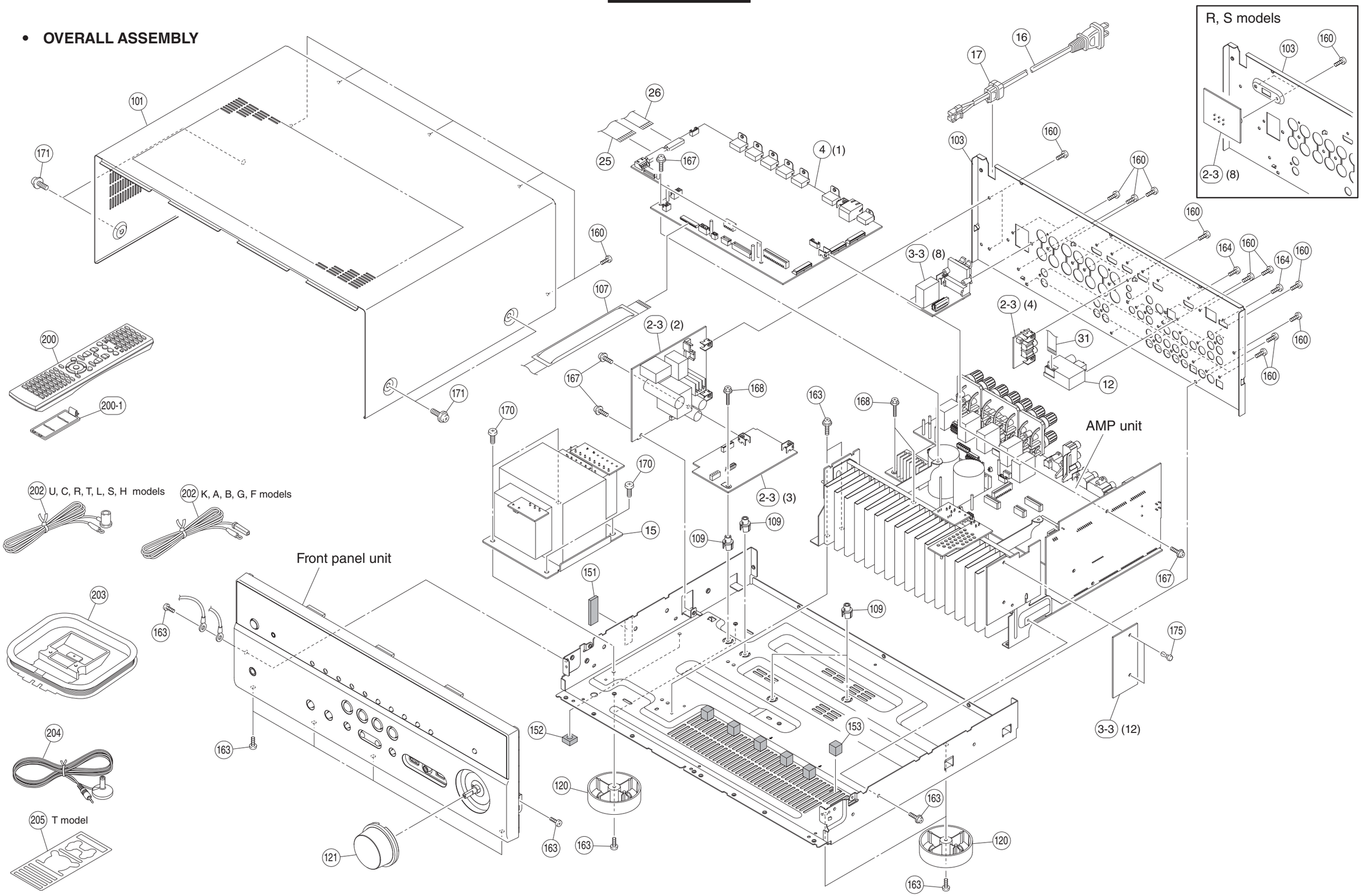
Value	**1/4W** Type Part No.	**1/6W** Type Part No.	Value	**1/4W** Type Part No.	**1/6W** Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	11 kΩ	HF45 7110	HF45 7110
1.8 Ω	HJ35 3180	✻	12 kΩ	HJ35 7120	HF85 7120
2.2 Ω	HJ35 3220	HF85 3220	13 kΩ	HF45 7130	HF45 7130
3.3 Ω	HJ35 3330	HF85 3330	15 kΩ	HF45 7150	HF45 7150
4.7 Ω	HJ35 3470	HF85 3470	18 kΩ	HF45 7180	HF45 7180
5.6 Ω	HJ35 3560	HF85 3560	22 kΩ	HF45 7220	HF45 7220
10 Ω	HF45 4100	HF45 4100	24 kΩ	HF45 7240	HF45 7240
15 Ω	HJ35 4150	HF85 4150	27 kΩ	HJ35 7270	HF85 7270
22 Ω	HF45 4220	HF45 4220	30 kΩ	HF45 7300	HF45 7300
27 Ω	HJ35 4270	HF85 4270	33 kΩ	HF45 7330	HF45 7330
33 Ω	HF45 4330	HF45 4330	36 kΩ	HF45 7360	HF45 7360
39 Ω	HJ35 4470	HF85 4390	39 kΩ	HF45 7390	HF45 7390
47 Ω	HF45 4470	HF45 4470	47 kΩ	HF45 7470	HF45 7470
56 Ω	HF45 4560	HF45 4560	51 kΩ	HF45 7510	HF45 7510
68 Ω	HF45 4680	HF45 4680	56 kΩ	HF45 7560	HF45 7560
75 Ω	HF45 4750	HF45 4750	62 kΩ	HF45 7620	HF45 7620
82 Ω	HF45 4820	HF45 4820	68 kΩ	HF45 7680	HF45 7680
91 Ω	HF45 4910	HF45 4910	82 kΩ	HF45 7820	HF45 7820
100 Ω	HF45 5100	HF45 5100	91 kΩ	HF45 7910	HF45 7910
110 Ω	HJ35 5110	HF85 5110	100 kΩ	HF45 8100	HF45 8100
120 Ω	HF45 5120	HF45 5120	110 kΩ	HF45 8110	HF45 8110
150 Ω	HF45 5150	HF45 5150	120 kΩ	HF45 8120	HF45 8120
160 Ω	HJ35 5160	✻	130 kΩ	HF45 8130	✻
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	✻
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	✻
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			
10 kΩ	HF45 7100	HF45 7100			



✻ : Not available

RX-V673/HTR-6065

- **OVERALL ASSEMBLY**



RX-V673/HTR-6065

		Ref No.	Part No.	Description		Remarks	Markets
	*	2-3	ZC104600	P.C.B. ASSEMBLY	VIDEO		U
	*	2-3	ZC104700	P.C.B. ASSEMBLY	VIDEO		C
	*	2-3	ZC104800	P.C.B. ASSEMBLY	VIDEO		RS
	*	2-3	ZC104900	P.C.B. ASSEMBLY	VIDEO		T
	*	2-3	ZC105000	P.C.B. ASSEMBLY	VIDEO		K
	*	2-3	ZC105100	P.C.B. ASSEMBLY	VIDEO		A
	*	2-3	ZC105200	P.C.B. ASSEMBLY	VIDEO		BGF
	*	2-3	ZC105300	P.C.B. ASSEMBLY	VIDEO		LH
	*	3-3	ZC102100	P.C.B. ASSEMBLY	OPERATION		UC
	*	3-3	ZC102200	P.C.B. ASSEMBLY	OPERATION		RTKABGFLSH
	*	4	ZC099900	P.C.B. ASSEMBLY	DIGITAL		
		12	WW891000	AM/FM TUNER	FAEH08-W02		UCRTLSH
		12	WW891100	AM/FM TUNER	FAEH08-E02		KABGF
⚠	*	15	YD387A00	POWER TRANSFORMER			UC
⚠	*	15	YD388A00	POWER TRANSFORMER			RS
⚠	*	15	YD389A00	POWER TRANSFORMER			TK
⚠	*	15	YD390A00	POWER TRANSFORMER			ALH
⚠	*	15	YD391A00	POWER TRANSFORMER			BGF
⚠		16	WY040900	POWER CABLE	1.8m		UC
⚠		16	WY042500	POWER CABLE	1.8m		R
⚠		16	WY042600	POWER CABLE	1.8m		T
⚠		16	WY042400	POWER CABLE	1.8m		K
⚠		16	WY042100	POWER CABLE	1.8m		A
⚠		16	WY041100	POWER CABLE	1.8m		B
⚠		16	WR336900	POWER CABLE	2m		GFL
⚠	*	16	ZC898500	POWER CABLE	1.8m		S
⚠		16	WY094600	POWER CABLE	1.8m		H
		17	V2438700	CORD STOPPER	10P1		
	*	25	ZC038600	FLEXIBLE FLAT CABLE	20P 200mm P=1.25		
	*	26	ZC038500	FLEXIBLE FLAT CABLE	16P 250mm P=1.25		
		31	WY194600	FLEXIBLE FLAT CABLE	9P 100mm P=1.25		
	*	101	ZA554700	TOP COVER		GD(Gold)	
	*	101	ZA554500	TOP COVER		BL(Black)	
	*	101	ZA554600	TOP COVER		Tl(Titanium)	
	*	103	ZA558400	REAR PANEL			UC
	*	103	ZA558500	REAR PANEL			RS
	*	103	ZA558600	REAR PANEL			T
	*	103	ZA558800	REAR PANEL			KALH
	*	103	ZA558900	REAR PANEL			BGF
	*	107	ZC017300	FFC BARRIER			
		109	WQ664500	SUPPORT	H8		
	*	120	ZC181800	LEG	D60/H21 Black		
	*	121	ZA168900	KNOB	D52 VOLUME	GD(Gold)	
	*	121	ZA168700	KNOB	D52 VOLUME	BL(Black)	

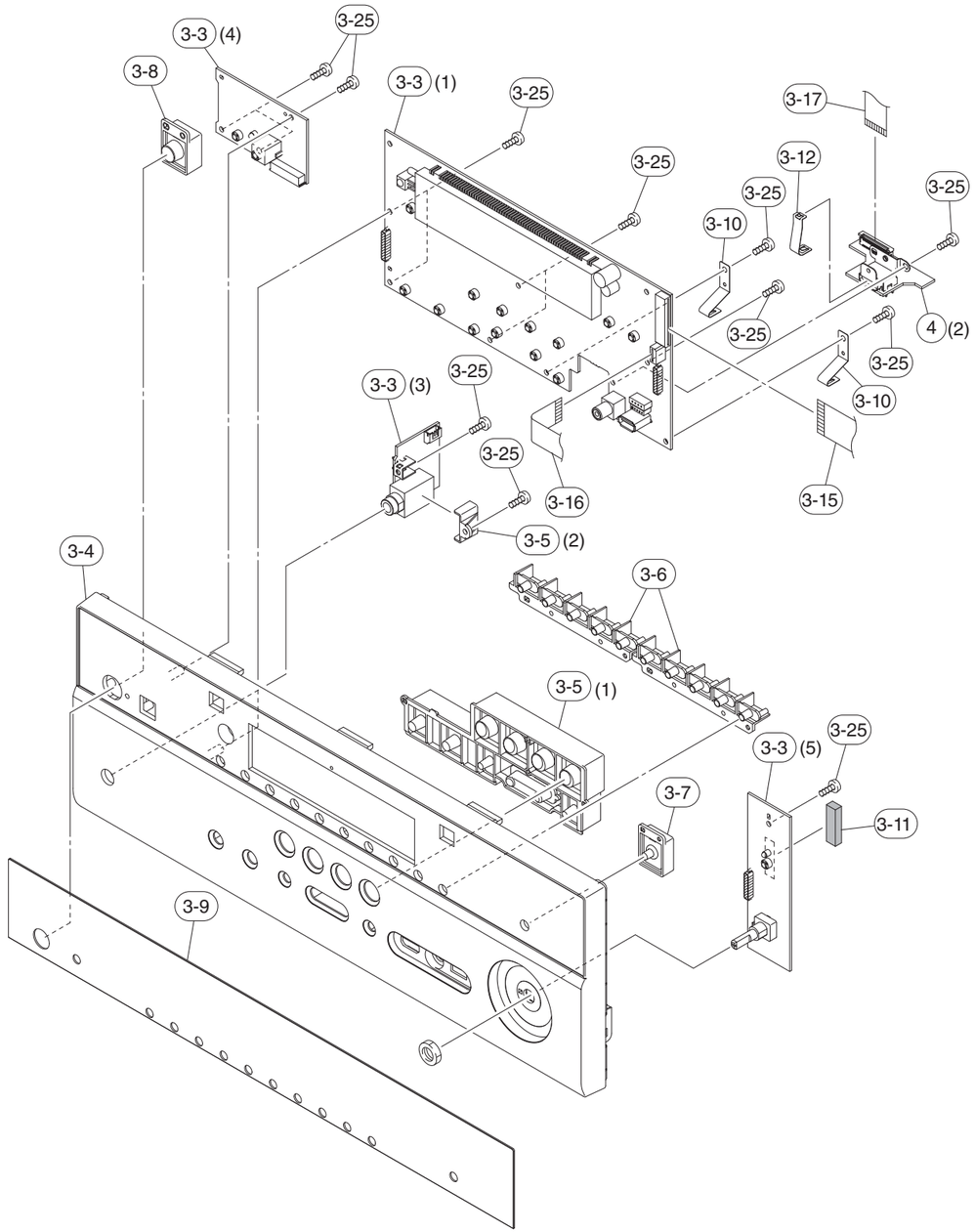
* New Parts

	Ref No.	Part No.	Description			Remarks	Markets
*	121	ZA168800	KNOB	D52 VOLUME		Tl(Titanium)	
	151	V5881100	CUSHION	5x8x25			
	152	WC879000	DAMPER	SCREW MASK			
	153	WR377400	DAMPER	14x10x10			
	160	WE774100	BIND HEAD BONDING B-T. SCREW	3x8	MFZN2B3		
	163	WE774300	BIND HEAD B-TIGHT SCREW	3x8	MFZN2W3		
	164	WE877900	BIND HEAD S-TIGHT SCREW	3x6	MFZN2W3		
	167	WF002600	PW HEAD B-TIGHT SCREW	3x8	MFZN2W3		
	168	WE774600	HEXAGONAL HEAD B-TIGHT SCREW	3x18	MFZN2W3		
	170	WU048900	BIND HEAD S-TIGHT SCREW	4x10	MFZN2W3		
	171	VD069600	PW HEAD S-TIGHT SCREW	4x8-10	MFNI33	GD(Gold)	
	171	VH313200	PW HEAD S-TIGHT SCREW	4x8-10	MFNI3BL	BL(Black)	
	171	VD069600	PW HEAD S-TIGHT SCREW	4x8-10	MFNI33	Tl(Titanium)	
	175	VQ368600	PUSH RIVET	P3555-B			
			ACCESSORIES				
*	200	ZA238200	REMOTE CONTROL	RAV472		000-224700010	
	200-1	AAX82380	BATTERY COVER	Black		CG-2209	
	202	V6267000	FM ANTENNA	1.4m 1pc			UCRTLSH
	202	VQ147100	FM ANTENNA	1.4m 1pc			KABGF
	203	VR248500	AM ANTENNA	1m 1pc			
	204	WN649600	YPAO MICROPHONE	6m 1pc		EM6022L-HN1700	
*	205	ZC175500	REMOTE CONTROL SHEET	1pc			T
			BATTERY	R03,AAA,UM-4 2pcs			

* New Parts

RX-V673/HTR-6065

- **FRONT PANEL UNIT**

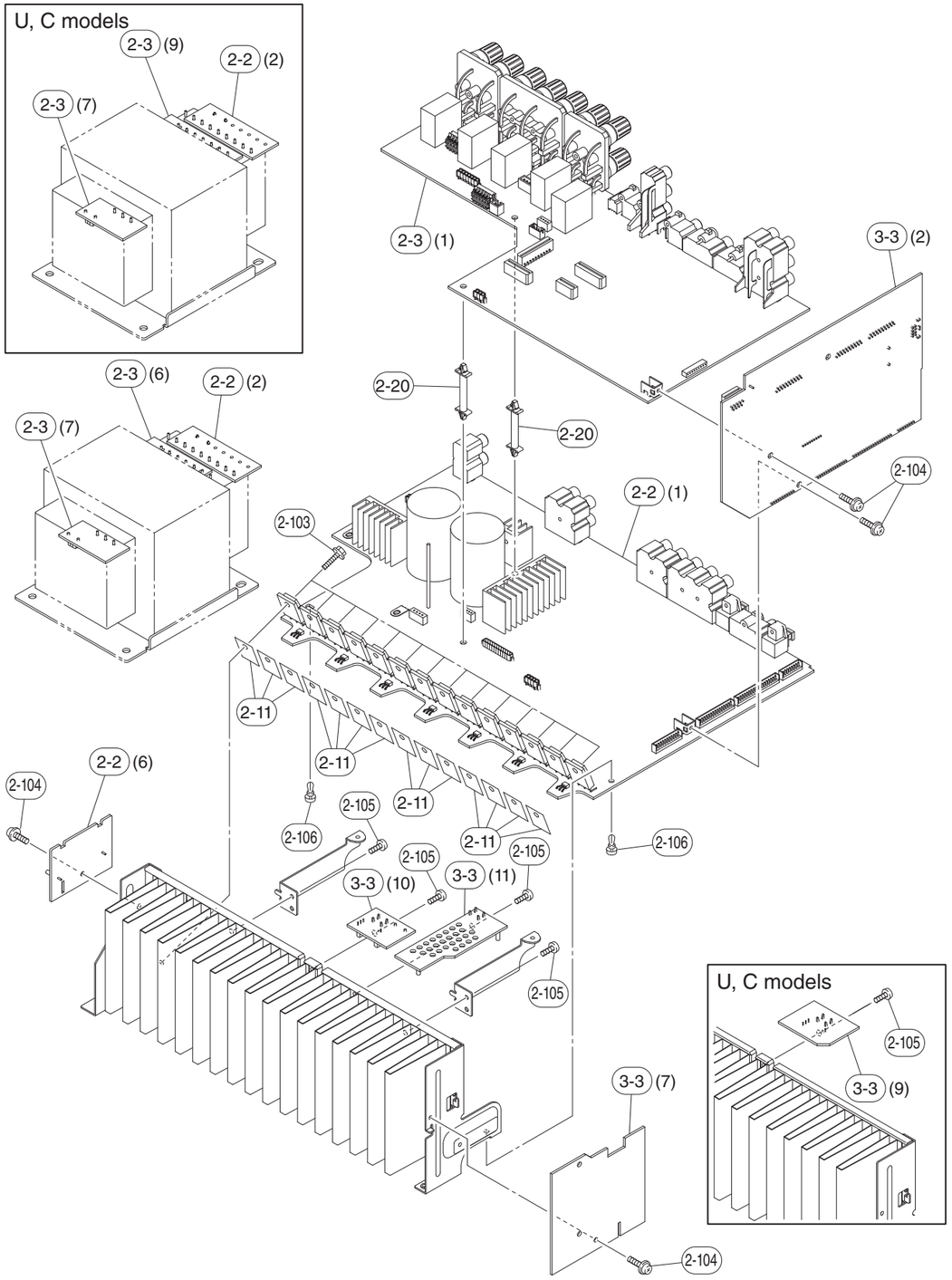


	Ref No.	Part No.	Description		Remarks	Markets
*	3-3	ZC102100	P.C.B. ASSEMBLY	OPERATION		UC
*	3-3	ZC102200	P.C.B. ASSEMBLY	OPERATION		RTKABGFLSH
*	3-4	ZA582000	FRONT PANEL		GD(Gold)	
*	3-4	ZA581800	FRONT PANEL	RX-V673, HTR-6065	BL(Black)	
*	3-4	ZA581900	FRONT PANEL		TI(Titanium)	
*	3-5	ZA281500	BUTTON	SCENE	GD(Gold)	
*	3-5	ZA281300	BUTTON	SCENE	BL(Black)	
*	3-5	ZA281400	BUTTON	SCENE	TI(Titanium)	
	3-6	WT823900	BUTTON	TUNER		
	3-7	WT871300	BUTTON	PURE DIRECT		
	3-8	WT843800	BUTTON	POWER		
*	3-9	ZA582100	WINDOW SHEET		RX-V673	
*	3-9	ZA582200	WINDOW SHEET		HTR-6065	
*	3-10	ZA582300	EARTH PLATE	OPEARTION		
	3-11	V5881100	CUSHION	5x8x25		
*	3-12	ZA582400	EARTH PLATE			
	3-15	WY194500	FLEXIBLE FLAT CABLE	26P 300mm P=1.25		
*	3-16	ZA116800	FLEXIBLE FLAT CABLE	6P 300mm P=1.25		
*	3-17	ZA116600	FLEXIBLE FLAT CABLE	22P 210mm P=1.0		
	3-25	WE774800	BIND HEAD P-TIGHT SCREW	3x8 MFZN2W3		
*	4	ZC099900	P.C.B. ASSEMBLY	DIGITAL		

* New Parts

RX-V673/HTR-6065

- **AMP UNIT**

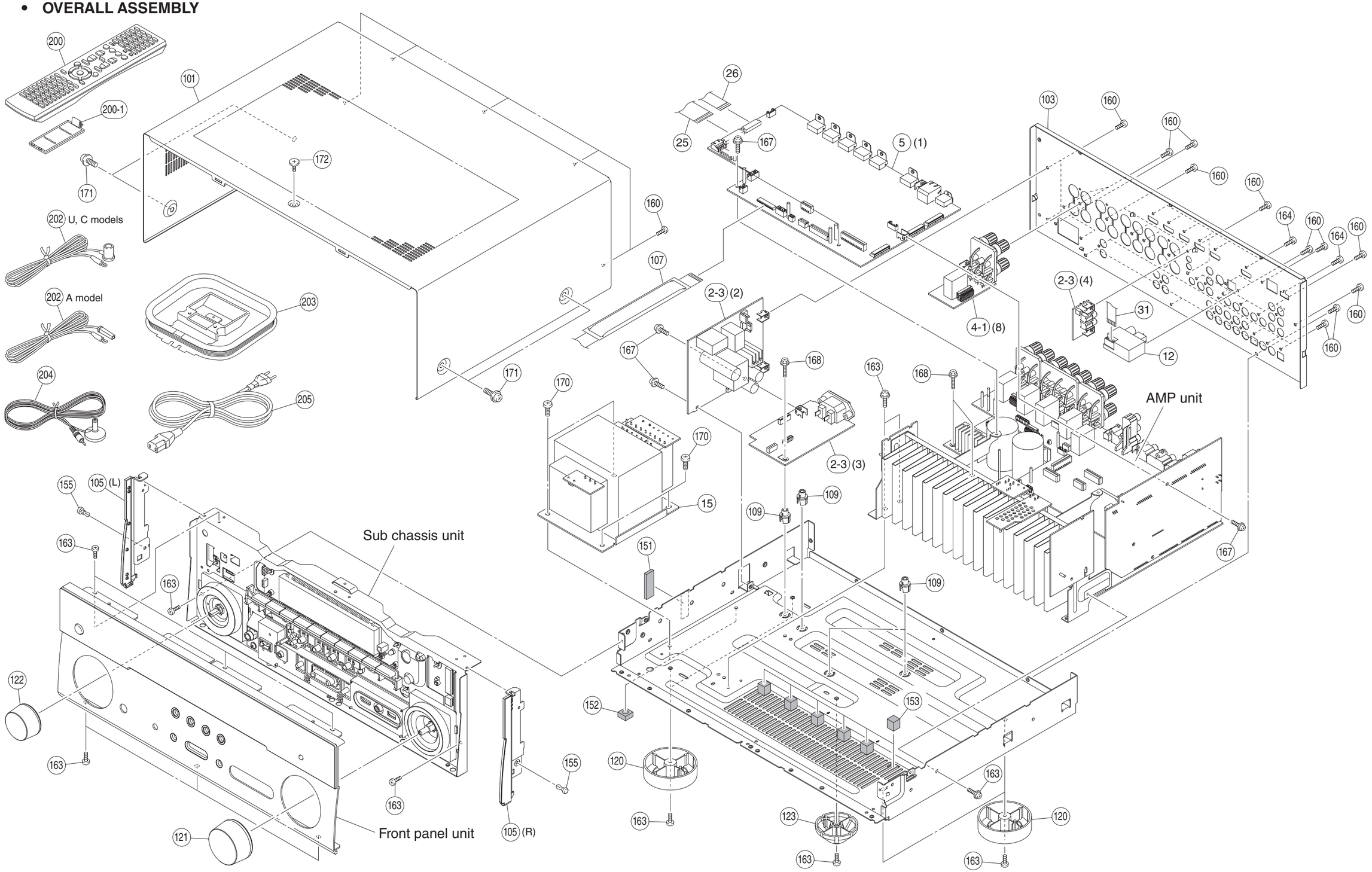


	Ref No.	Part No.	Description		Remarks	Markets
*	2-2	WZ886500	P.C.B. ASSEMBLY	MAIN		UCRTKALSH
*	2-2	WZ886600	P.C.B. ASSEMBLY	MAIN		B
*	2-2	WZ886700	P.C.B. ASSEMBLY	MAIN		GF
*	2-3	ZC104600	P.C.B. ASSEMBLY	VIDEO		U
*	2-3	ZC104700	P.C.B. ASSEMBLY	VIDEO		C
*	2-3	ZC104800	P.C.B. ASSEMBLY	VIDEO		RS
*	2-3	ZC104900	P.C.B. ASSEMBLY	VIDEO		T
*	2-3	ZC105000	P.C.B. ASSEMBLY	VIDEO		K
*	2-3	ZC105100	P.C.B. ASSEMBLY	VIDEO		A
*	2-3	ZC105200	P.C.B. ASSEMBLY	VIDEO		BGF
*	2-3	ZC105300	P.C.B. ASSEMBLY	VIDEO		LH
	2-11	WQ753200	RADIATION SHEET	40x23x0.06 MICA		
	2-20	WS000800	SPACER SUPPORT	LCA4-29M PIN		
	2-103	WM220800	HEXAGONAL HEAD B-TIGHT SCREW	3x15 SP MFZN2W3		
	2-104	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	2-105	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	2-106	VQ368600	PUSH RIVET	P3555-B		
*	3-3	ZC102100	P.C.B. ASSEMBLY	OPERATION		UC
*	3-3	ZC102200	P.C.B. ASSEMBLY	OPERATION		RTKABGFLSH

* New Parts

RX-A720

• OVERALL ASSEMBLY



RX-A720

	Ref No.	Part No.	Description		Remarks	Markets
*	2-3	ZC105400	P.C.B. ASSEMBLY	VIDEO		U
*	2-3	ZC105500	P.C.B. ASSEMBLY	VIDEO		C
*	2-3	ZC105600	P.C.B. ASSEMBLY	VIDEO		A
*	4-1	ZC102400	P.C.B. ASSEMBLY	OPERATION		UC
*	4-1	ZC102500	P.C.B. ASSEMBLY	OPERATION		A
*	5	ZC099900	P.C.B. ASSEMBLY	DIGITAL		
	12	WW891000	AM/FM TUNER	FAEH08-W02		UC
	12	WW891100	AM/FM TUNER	FAEH08-E02		A
⚠ *	15	YD387A00	POWER TRANSFORMER			UC
⚠ *	15	YD390A00	POWER TRANSFORMER			A
*	25	ZC038600	FLEXIBLE FLAT CABLE	20P 200mm P=1.25		
*	26	ZC038500	FLEXIBLE FLAT CABLE	16P 250mm P=1.25		
	31	WY194600	FLEXIBLE FLAT CABLE	9P 100mm P=1.25		
	101	WQ665500	TOP COVER			
*	103	ZA559300	REAR PANEL			
	105	WW982200	SIDE PLATE			
*	107	ZC017300	FFC BARRIER			
	109	WQ664500	SUPPORT	H8		
*	120	ZC181800	LEG	D60/H21 Black		
	121	WW981000	KNOB	D48 VOLUME		
	122	WW981300	KNOB	D38 INPUT		
	123	WV139700	CENTER LEG	D48		
	151	V5881100	CUSHION	5x8x25		
	152	WC879000	DAMPER	SCREW MASK		
	153	WR377400	DAMPER	14x10x10		
	155	VQ368600	PUSH RIVET	P3555-B		
	160	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3		
	163	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	164	WE877900	BIND HEAD S-TIGHT SCREW	3x6 MFZN2W3		
	167	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	168	WE774600	HEXAGONAL HEAD B-TIGHT SCREW	3x18 MFZN2W3		
	170	WU048900	BIND HEAD S-TIGHT SCREW	4x10 MFZN2W3		
	171	VH313200	PW HEAD S-TIGHT SCREW	4x8-10 MFNI3BL		
	172	WE200500	DISH HEAD B-TIGHT SCREW	3x6 MFNI3BL		

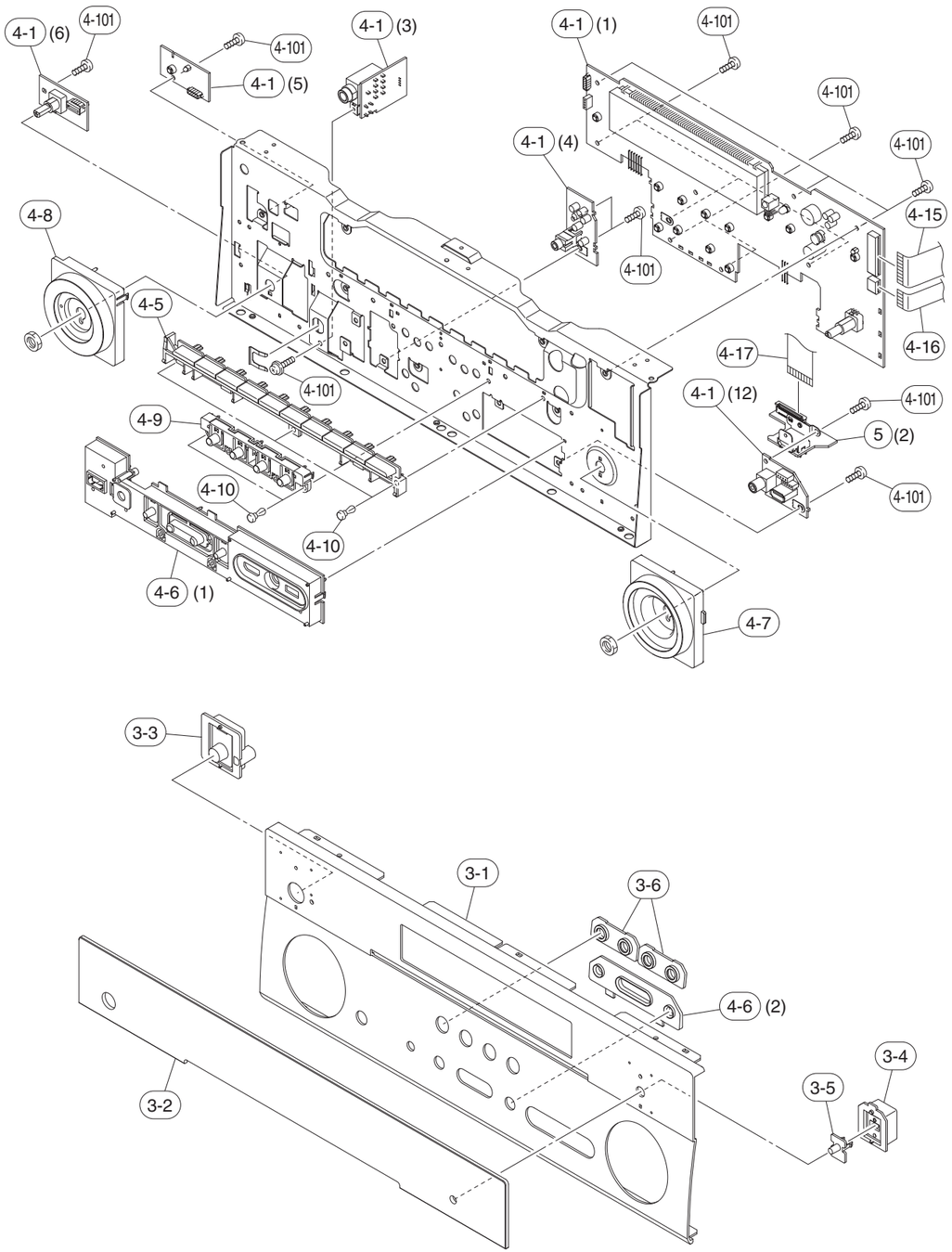
* New Parts

	Ref No.	Part No.	Description		Remarks	Markets
			ACCESSORIES			
*	200	ZA238200	REMOTE CONTROL	RAV472	000-224700010	
	200-1	AAX82380	BATTERY COVER	Black	CG-2209	
	202	V6267000	FM ANTENNA	1.4m 1pc		UC
	202	VQ147100	FM ANTENNA	1.4m 1pc		A
	203	VR248500	AM ANTENNA	1m 1pc		
	204	WN649600	YPAO MICROPHONE	6m 1pc	EM6022L-HN1700	
⚠	205	WU900300	POWER CABLE	2m 1pc		UC
⚠	205	WB750900	POWER CABLE	2m 1pc		A
			BATTERY	R03,AAA,UM-4 2pcs		

* New Parts

RX-A720

- **FRONT PANEL UNIT and SUB-CHASSIS UNIT**

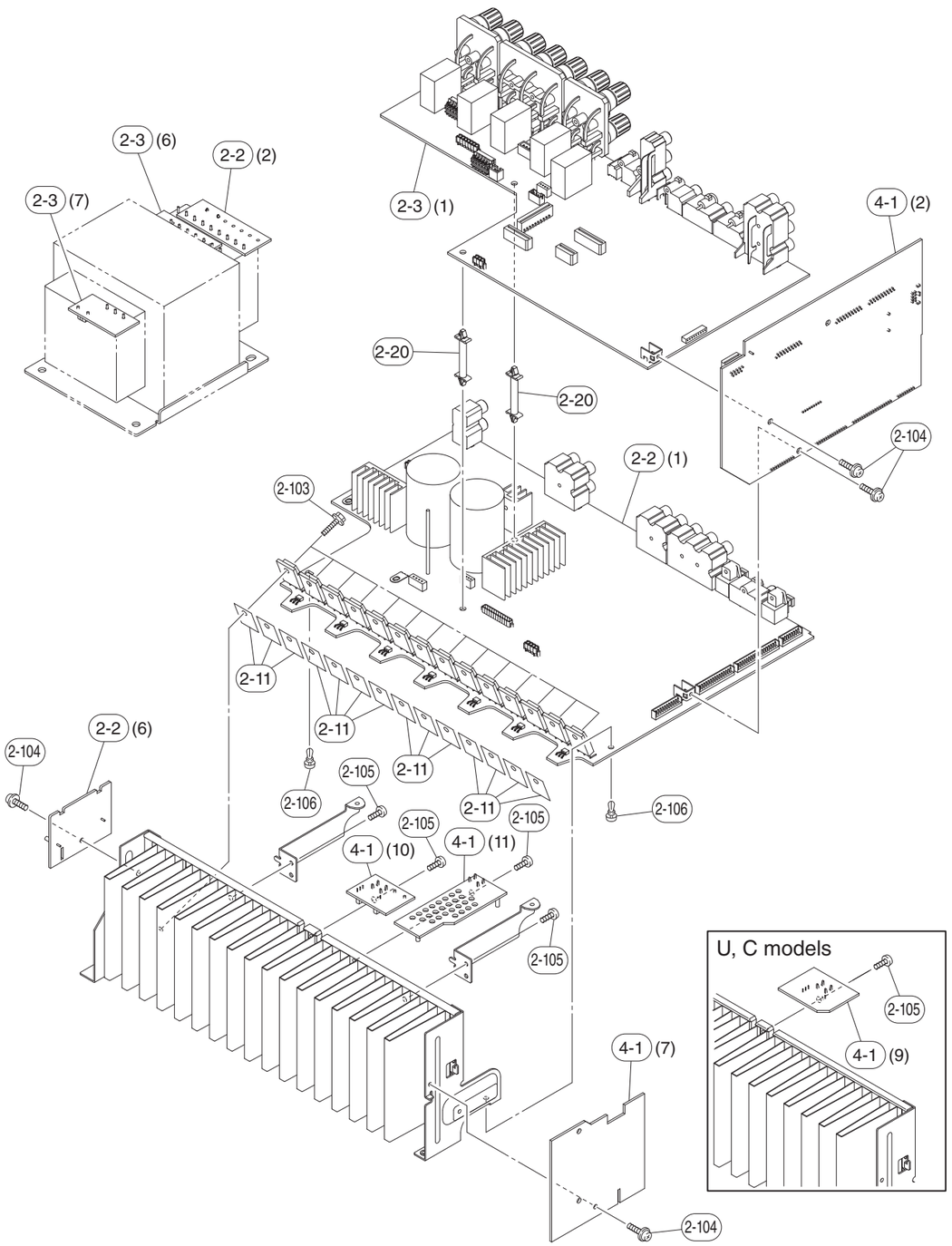


	Ref No.	Part No.	Description		Remarks	Markets
*	3-1	ZA569500	FRONT PANEL			
*	3-2	ZA567900	WINDOW SHEET			
	3-3	WW980100	BUTTON	POWER		
	3-4	WW980500	BUTTON	PURE DIRECT		
	3-5	WU155600	LENS	PURE DIRECT		
	3-6	WW961500	ESCUTCHEON	SCENE		
*	4-1	ZC102400	P.C.B. ASSEMBLY	OPERATION		UC
*	4-1	ZC102500	P.C.B. ASSEMBLY	OPERATION		A
	4-5	WW983400	BUTTON	TUNER		
*	4-6	ZA567100	BUTTON CASE			
	4-7	WW981600	ESCUTCHEON	VOLUME		
	4-8	WW981900	ESCUTCHEON	INPUT		
	4-9	WW983100	BUTTON	SCENE		
	4-10	VQ368600	PUSH RIVET	P3555-B		
	4-15	WP242200	FLEXIBLE FLAT CABLE	26P 250mm P=1.25		
*	4-16	ZA116700	FLEXIBLE FLAT CABLE	6P 200mm P=1.25		
*	4-17	ZA116600	FLEXIBLE FLAT CABLE	22P 210mm P=1.0		
	4-101	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		
*	5	ZC099900	P.C.B. ASSEMBLY	DIGITAL		

* New Parts

RX-A720

- **AMP UNIT**

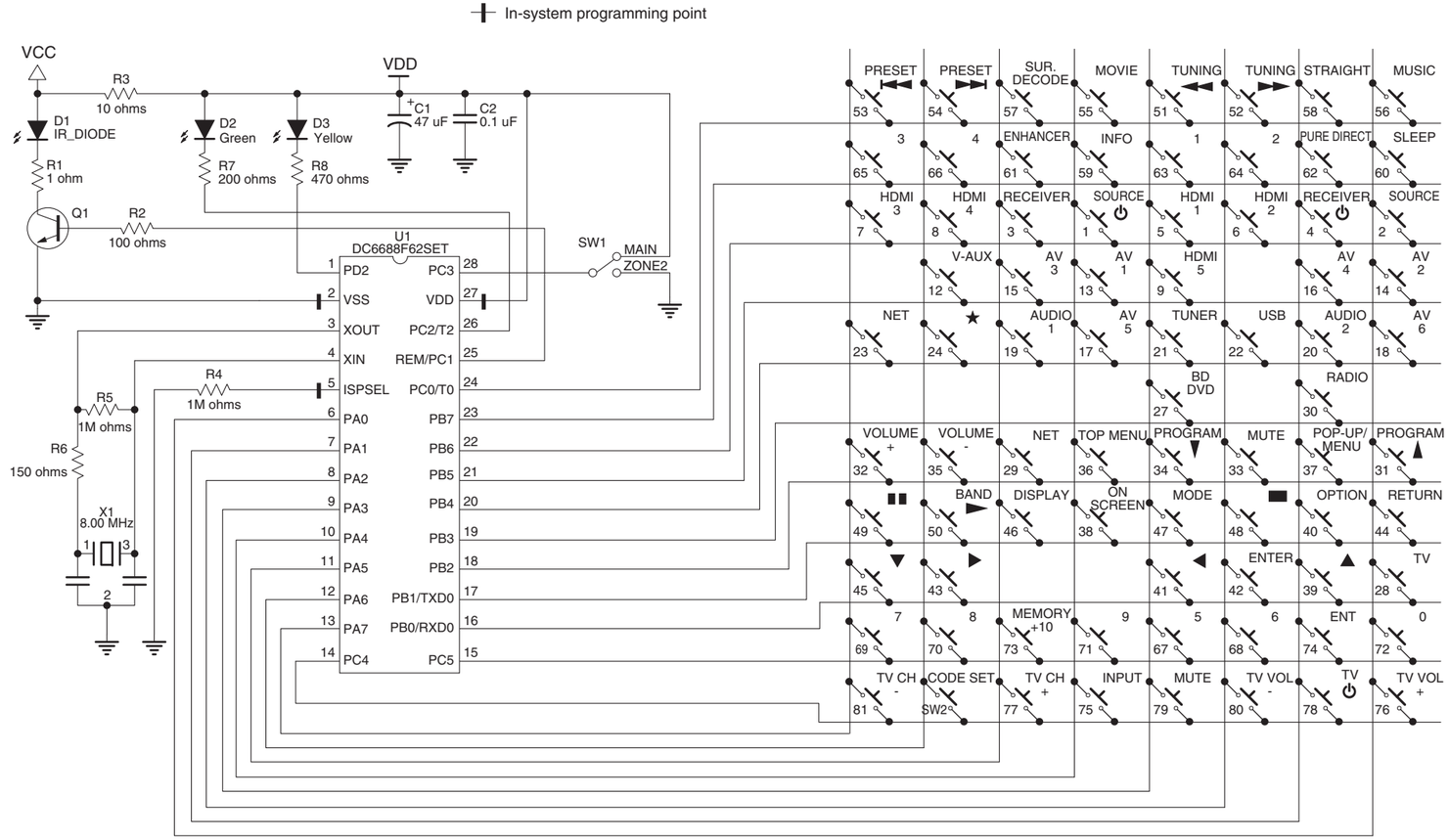


	Ref No.	Part No.	Description		Remarks	Markets
*	2-2	WZ886500	P.C.B. ASSEMBLY	MAIN		
*	2-3	ZC105400	P.C.B. ASSEMBLY	VIDEO		U
*	2-3	ZC105500	P.C.B. ASSEMBLY	VIDEO		C
*	2-3	ZC105600	P.C.B. ASSEMBLY	VIDEO		A
	2-11	WQ753200	RADIATION SHEET	40x23x0.06 MICA		
	2-20	WS000800	SPACER SUPPORT	LCA4-29M PIN		
	2-103	WM220800	HEXAGONAL HEAD B-TIGHT SCREW	3x15 SP MFZN2W3		
	2-104	WF002600	PW HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	2-105	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		
	2-106	VQ368600	PUSH RIVET	P3555-B		
*	4-1	ZC102400	P.C.B. ASSEMBLY	OPERATION		UC
*	4-1	ZC102500	P.C.B. ASSEMBLY	OPERATION		A

* New Parts

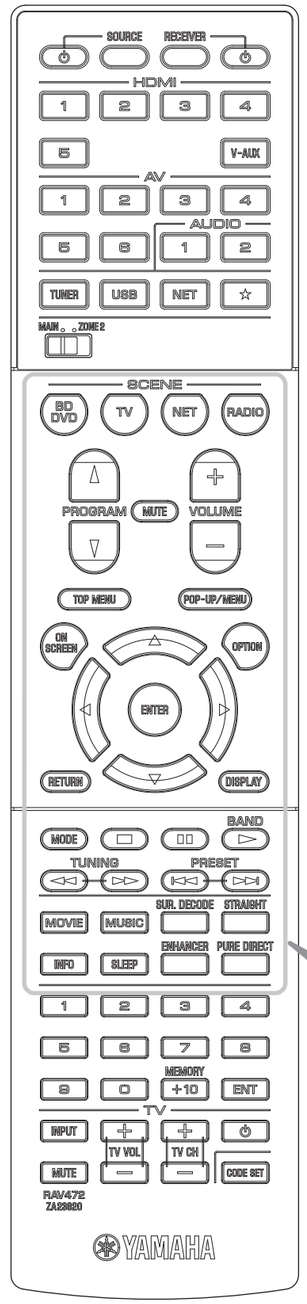
■ REMOTE CONTROL

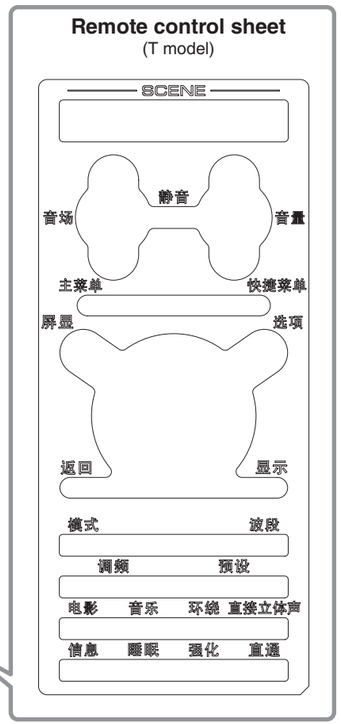
SCHEMATIC DIAGRAM



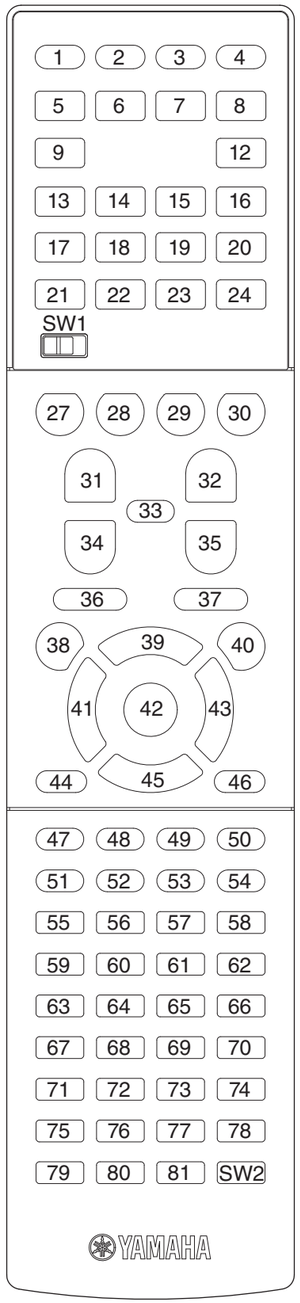
PANEL

RAV472





KEY NO. LAYOUT



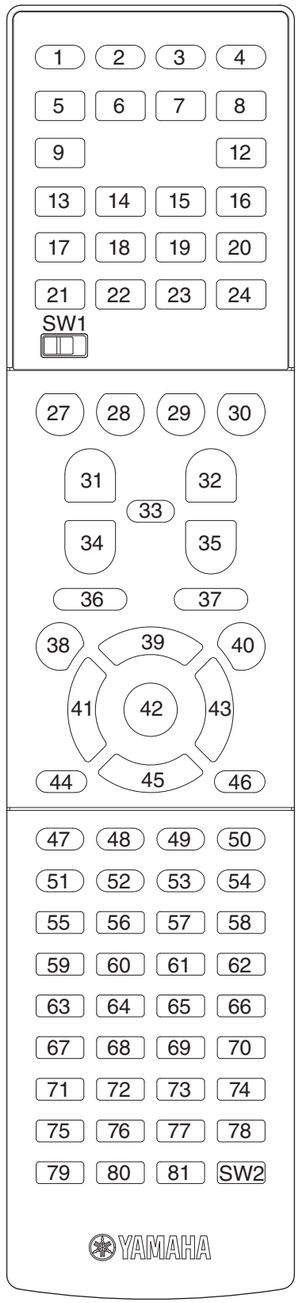
KEY CODE

RECEIVER MODE

	Key No.	FUNCTION (U, C, R, T, K, A, B, G, F, L, S, H models)	FUNCTION Remote control sheet (T model)	ID-1 (5019) MAIN	ID-1 (5019) ZONE2	ID-2 (5020) MAIN	ID-2 (5020) ZONE2
	SW1	MAIN/ZONE2		[MAIN]	[ZONE2]	[MAIN]	[ZONE2]
	SW2	CODE SET		[CODE SET]	[CODE SET]	[CODE SET]	[CODE SET]
	K2	SOURCE		select RCU "mode: SOURCE"			
	K3	RECEIVER		select RCU "mode: RECEIVER"			
"RECEIVER" (mode fixed)	K4	RECEIVER ⏻		7E-2A	7A-453A	7E-2AD4	7A-453B
	K5	HDMI-1		7A-4738	7A-4837	7A-4739	7A-4836
	K6	HDMI-2		7A-4A35	7A-4B34	7A-4A34	7A-4B35
	K7	HDMI-3		7A-4D32	7A-4E31	7A-4D33	7A-4E30
	K8	HDMI-4		7A-502F	7A-512E	7A-502E	7A-512F
	K9	HDMI-5		7A-700F	7A-710E	7A-700E	7A-710F
	K12	V-AUX		7A-55	7A-D8	7A-55AB	7A-D826
	K13	AV-1		7A-532C	7A-542B	7A-532D	7A-542A
	K14	AV-2		7A-5629	7A-5728	7A-5628	7A-5729
	K15	AV-3		7A-5926	7A-5A25	7A-5927	7A-5A24
	K16	AV-4		7A-5C23	7A-5D22	7A-5C22	7A-5D23
	K17	AV-5		7A-5F20	7A-601F	7A-5F21	7A-601E
	K18	AV-6		7A-621D	7A-631C	7A-621C	7A-631D
	K19	AUDIO-1		7A-651A	7A-6619	7A-651B	7A-6618
	K20	AUDIO-2		7A-6817	7A-6916	7A-6816	7A-6917
	K21	TUNER		7A-16	7A-D2	7A-16E8	7A-D22C
	K22	USB		7F01-720D	7F01-730C	7F01-720C	7F01-730D
	K23	NET		7F01-3F	7F01-40	7F01-3FC1	7F01-40BE
	K24	★		7A-14	7A-D0	7A-14EA	7A-D02E
	K27	BD/DVD (SCENE)		7A-007F	7A-017E	7A-007E	7A-017F
	K28	TV (SCENE)		7A-037C	7A-047B	7A-037D	7A-047A
	K29	NET (SCENE)		7A-0679	7A-0778	7A-0678	7A-0779
	K30	RADIO (SCENE)		7A-0976	7A-0A75	7A-0977	7A-0A74
	K31	PROGRAM ▲	音场	7A-58	–	7A-58A6	–
	K32	VOLUME (+)	音量	7A-1A	7A-DA	7A-1AE4	7A-DA24
	K33	MUTE	静音	7A-1C	7A-DC	7A-1CE2	7A-DC22
	K34	PROGRAM ▼	音场	7A-59	–	7A-59A7	–
	K35	VOLUME (-)	音量	7A-1B	7A-DB	7A-1BE5	7A-DB25
	K38	ON SCREEN	屏显	7A-84	7A-3B44	7A-847A	7A-3B45
	K40	OPTION	选项	7A-6B14	7A-6C13	7A-6B15	7A-6C12
	K55	MOVIE	电影	7A-88	–	7A-8876	–
	K56	MUSIC	音乐	7A-89	–	7A-8977	–
	K57	SUR. DECODE	环绕	7A-8D	–	7A-8D73	–
	K58	STRAIGHT	直接立体声	7A-56	–	7A-56A8	–
	K59	INFO	信息	7A-2758	7A-2857	7A-2759	7A-2856
	K60	SLEEP	睡眠	7A-30	7A-31	7A-30CE	7A-31CF
	K61	ENHANCER	强化	7A-94	–	7A-946A	–
	K62	PURE DIRECT	直通	7A-DD	–	7A-DD23	–

K41 [◀ cursor -LEFT] + K27 [SCENE -BD/DVD]	ID-1	
K41 [◀ cursor -LEFT] + K28 [SCENE -TV]		ID-2

K43 [▶ cursor -RIGHT] + K27 [SCENE -BD/DVD]	MAIN		MAIN	
K43 [▶ cursor -RIGHT] + K28 [SCENE -TV]		ZONE2		ZONE2
K43 [▶ cursor -RIGHT] + K29 [SCENE -NET]				



SOURCE MODE

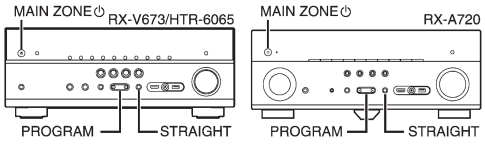
	Key No.	FUNCTION (U, C, R, T, K, A, B, G, F, L, S, H models)	Remote control sheet (T model)	IR code in "RECEIVER" mode ID-1 MAIN	IR code in "RECEIVER" mode ID-1 ZONE2	IR code in "RECEIVER" mode ID-2 MAIN	IR code in "RECEIVER" mode ID-2 ZONE2	IR code in "SOURCE" mode ID-1 / ID-2 MAIN / ZONE2 / ZONE3	K24 [☆]	K23 [NET]	K22 [USB]	K21 [TUNER]	K20 [AUDIO-2]	K19 [AUDIO-1]	K18 [AV-6]	K17 [AV-5]	K16 [AV-4]	K15 [AV-3]	K14 [AV-2]	K13 [AV-1]	K12 [V-AUX]	K9 [HDMI-5]	K8 [HDMI-4]	K7 [HDMI-3]	K6 [HDMI-2]	K5 [HDMI-1]
"SOURCE/ RECEIVER"	K1	SOURCE ⏻		7F01-50	7F01-70	7F01-50AE	7F01-708E	* SOURCE *	* RECEIVER *																	
	K36	TOP MENU	主菜单	7A-A0DF	7A-A1DE	7A-A0DE	7A-A1DF																			
				transmit "RECEIVER" code then switch RCU to "SOURCE" mode																						
	K37	POP-UP MENU		7A-A4DB	7A-A5DA	7A-A4DA	7A-A5DB																			
				transmit "RECEIVER" code then switch RCU to "SOURCE" mode																						
	K39	▲ (UP)		7A-9D	7A-2B54	7A-9D63	7A-2B55	* SOURCE *	* RECEIVER *																	
	K41	◀ (LEFT)		7A-9F	7A-2D52	7A-9F61	7A-2D53																			
	K42	ENTER		7A-DE	7A-2F50	7A-DE20	7A-2F51																			
	K43	▶ (RIGHT)		7A-9E	7A-2E51	7A-9E60	7A-2E50																			
	K44	RETURN		7A-AA	7A-3C43	7A-AA54	7A-3C42																			
	K45	▼ (DOWN)		7A-9C	7A-2C53	7A-9C62	7A-2C52																			
	K46	DISPLAY		7F01-60	7F01-80	7F01-609E	7F01-807E																			
	K47	MODE	模式	7F01-66	7F01-86	7F01-6698	7F01-8678	* SOURCE *	* RECEIVER *																	
	K48	■ (STOP)		7F01-69	7F01-89	7F01-6997	7F01-8977																			
	K49	▮▮ (PAUSE)		7F01-67	7F01-87	7F01-6799	7F01-8779																			
	K50	BAND ► (PLAY)	波段	7F01-68	7F01-88	7F01-6896	7F01-8876																			
	K51	◄◄ (REW) / TUNING (-)	调频	7F01-6A	7F01-8A	7F01-6A94	7F01-8A74																			
	K52	►► (FF) / TUNING (+)		7F01-6B	7F01-8B	7F01-6B95	7F01-8B75																			
	K53	⏮ (SKIP) / PRESET (-)	预设	7F01-6C	7F01-8C	7F01-6C92	7F01-8C72																			
	K54	⏭ (SKIP) / PRESET (+)		7F01-6D	7F01-8D	7F01-6D93	7F01-8D73																			
	K63	1		7F01-51	7F01-71	7F01-51AF	7F01-718F	* SOURCE *	* RECEIVER *																	
	K64	2		7F01-52	7F01-72	7F01-52AC	7F01-728C																			
	K65	3		7F01-53	7F01-73	7F01-53AD	7F01-738D																			
	K66	4		7F01-54	7F01-74	7F01-54AA	7F01-748A																			
	K67	5		7F01-55	7F01-75	7F01-55AB	7F01-758B																			
	K68	6		7F01-56	7F01-76	7F01-56A8	7F01-7688																			
	K69	7		7F01-57	7F01-77	7F01-57A9	7F01-7789																			
	K70	8		7F01-58	7F01-78	7F01-58A6	7F01-7886																			
	K71	9		7F01-59	7F01-79	7F01-59A7	7F01-7987																			
	K72	0		7F01-5A	7F01-7A	7F01-5AA4	7F01-7A84																			
	K73	+10 / MEMORY		7F01-5B	7F01-7B	7F01-5BA5	7F01-7B85																			
	K74	ENT		7F01-5C	7F01-7C	7F01-5CA2	7F01-7C82																			
"SOURCE" (mode fixed)	K75	TV -INPUT		* SOURCE (TV) *					* TV -INPUT																	
	K76	TV -VOL (+)							* TV -VOL (+)																	
	K77	TV -CH (+)							* TV -CH (+)																	
	K78	TV - ⏻							* TV - ⏻																	
	K79	TV -MUTE							* TV -MUTE																	
	K80	TV -VOL (-)							* TV -VOL (-)																	
	K81	TV -CH (-)							* TV -CH (-)																	

■ ADVANCED SETUP

Configure the system settings of the unit while viewing the front display.

1 Set the unit to standby mode.

2 While holding down STRAIGHT on the front panel, press MAIN ZONE ⏻.



3 Press PROGRAM to select an item.

4 Press STRAIGHT to select a setting.

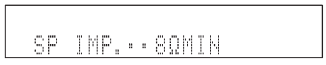
5 Press MAIN ZONE ⏻ to set the unit to standby mode and turn it on again.

The new settings take effect.

ADVANCED SETUP menu items

Item	Function
SP IMP.	Changes the speaker impedance setting.
REMOTE ID	Selects the unit's remote control ID.
TU (R, T, K, L, S, H models)	Changes the FM/AM tuning frequency setting.
TV FORMAT	Switches the video signal type.
MON.CHK	Removes the limitation on HDMI video output.
INIT	Restores the default settings.
UPDATE	Updates the firmware.
VERSION	Checks the version of firmware currently installed on the unit.

Changing the speaker impedance setting (SP IMP.)



Change the unit's speaker impedance settings depending on the impedance of the speakers connected.

Settings

6 Ω MIN	Select this option when you connect 6-ohm speakers to the unit. You can also use 4-ohm speakers as the front speakers.
8 Ω MIN (default)	Select this option when you connect 8-ohm or higher speakers to the unit.

Selecting the remote control ID (REMOTE ID)

Change the unit's remote control ID so that it matches the remote control's ID (default: ID1). When using multiple Yamaha AV receivers, you can set each remote control with a unique remote control ID for its corresponding receiver.

Settings

ID1 (default), ID2

■ Changing the remote control ID of the remote control

Perform each of the following steps within 1 minute. Otherwise, the setting will be automatically canceled.

1 Press CODE SET on the remote control.

2 Press RECEIVER.

3 Use the numeric keys to enter "5019" (ID1) or "5020" (ID2).

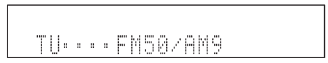
Once the remote control ID is registered successfully, SOURCE blinks twice.

If it blinks six times, registration failed. Repeat from Step 1.

- The registered remote control codes are not cleared even if you change the remote control ID.

Changing the FM/AM tuning frequency setting (TU)

(R, T, K, L, S, H models)

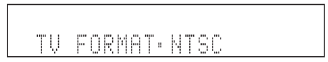


Change the FM/AM tuning frequency setting of the unit depending on your country or region.

Settings

FM100/AM10	Select this when you want to adjust the FM frequency by 100-kHz steps and AM by 10-kHz steps.
FM50/AM9 (default)	Select this when you want to adjust the FM frequency by 50-kHz steps and AM by 9-kHz steps.

Switching the video signal type (TV FORMAT)



Switch the video signal type of the unit so that it matches to the format of your TV.

Settings

NTSC, PAL

Default

U.S.A., Canada, Korea and General models: NTSC

Other models: PAL

Removing the limitation on HDMI video output (MON.CHK)

The unit automatically detects resolutions supported by a TV connected to the HDMI OUT jack.

Disable the monitor check function if you want to specify a resolution in "Resolution" when the unit cannot detect the TV's resolution or when you want to specify a different resolution than the detected resolution.

Settings

YES (default)	Enables the monitor check function. (Outputs video signals with a resolution supported by the TV only.)
SKIP	Disables the monitor check function. (Outputs video signals with a specified resolution regardless of compatibility with the TV.)

- Reset to "YES" if the unit becomes inoperable because video from the unit cannot be displayed on the TV after "MON.CHK" has been set to "SKIP".

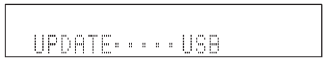
Restoring the default settings (INIT)

Restores the default settings for the unit.

Choices

VIDEO	Restores the default settings for video configurations.
ALL	Restores the default settings for the unit.
CANCEL	Does not perform an initialization.

Updating the firmware (UPDATE)



New firmware that provides additional features or product improvements will be released as needed. Updates can be downloaded from our website. If the unit is connected to the Internet, you can download the firmware via the network. For details, refer to the information supplied with updates.

■ Firmware update procedure

Do not perform this procedure unless firmware update is necessary. Also, make sure you read the information supplied with updates before updating the firmware.

1 Press STRAIGHT repeatedly to select "USB" or "NETWORK" and press INFO to start firmware update.

Choices

USB	Update the firmware using a USB memory device.
NETWORK	Update the firmware via the network.

- If the unit detects newer firmware over the network, the corresponding message will be displayed after ON SCREEN is pressed. In this case, you can also update the unit's firmware by following the procedure in "Updating the unit's firmware".

Checking the firmware version (VERSION)

Check the version of firmware currently installed on the unit.

- You can also check the firmware version in "System" in the "Information" menu.

RX-V673/HTR-6065

FIRMWARE UPDATING PROCEDURE

IMPORTANT NOTICE

Do not attempt to update your Yamaha receiver using any other data file except those provided directly from the Yamaha website or through your network connection.
Follow the instructions carefully and do not attempt any other procedures not specified in the instructions provided by Yamaha.
Improperly updated products may cause improper operation, and any parts or service required to restore proper operation will not be covered under the Yamaha Limited Warranty.

Choose from the following 2 methods to update to the latest firmware.

Click here for Firmware Update Through the Internet

(Connection to the Internet is required)

Click here for Firmware Update by USB

(A USB thumb drive is required)

In case of error, see the Troubleshooting section

RX-V673/HTR-6065

Firmware Update Through the Internet

Requirement: Internet connection

Your receiver is connected to the Internet if you can receive Internet radio stations.
(See owner's manual for details)

1 Power off the receiver (Standby mode)

2 Enter the ADVANCED SETUP mode

While pressing the **STRAIGHT** key, press the **MAIN ZONE** key and keep **STRAIGHT** key pressed until "ADVANCED SETUP" appears on the front panel display.

* "ADVANCED SETUP" is displayed only for a few seconds.

3 Select "FIRM UPDATE" from the menu

a. Press the **PROGRAM** key until "UPDATE····USB" is displayed.

b. Then, press **STRAIGHT** key until "UPDATE·NETWORK" is displayed.

4 Start firmware update

a. Press **INFO** key to start the update.

(Update process may take up to 15 minutes)

* If "UPDATE SUCCESS" appears, this means your receiver is already up-to-date. In this case, power off to exit from Advanced Setup. Your AV receiver is ready for normal use.

Firmware update in progress

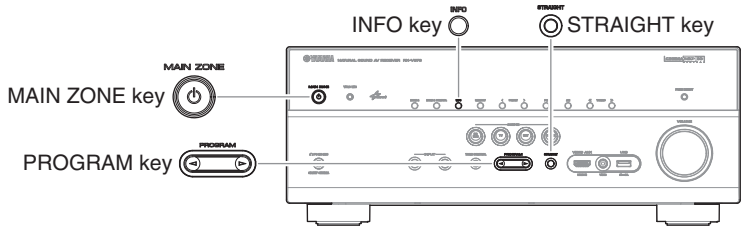
Caution

DO NOT interrupt power during the update.

In case the power is accidentally cut off resulting in a condition where you can't recover normal operation, refer to the troubleshooting method (**Troubleshooting CASE 2**) on the last page.

b. When completed, "UPDATE SUCCESS" appears on the display.

c. Turn off the power of the receiver by pressing the **MAIN ZONE** key.



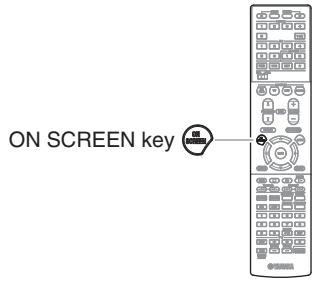
RX-V673/HTR-6065

5 Check the updated firmware version

a. Power on the AV receiver and press the **ON SCREEN** key on the remote control.

b. Select “Information” > “System”.

c. Confirm that the firmware version is updated to the latest version.



Congratulations!

You have completed the firmware update. Your AV receiver is ready for normal use.

RX-V673/HTR-6065

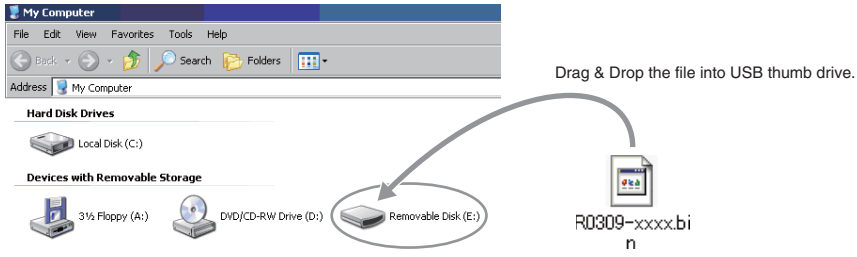
Firmware Update by USB

Requirement: USB thumb drive, with enough free space to store over 25MB.
(File system with FAT16 or FAT32 format)

Firmware file provided by YAMAHA,"R0309-xxxx.bin".

1 Prepare USB thumb drive for the update

Download the firmware, unzip and copy "R0309-xxxx.bin" into the root directory of the USB thumb drive.



2 Power off the receiver (Standby mode)

3 Insert the USB thumb drive

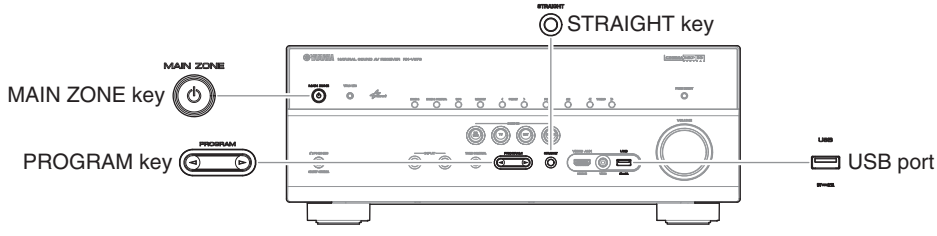
USB port is located at the lower left corner of the front panel.

4 Enter the ADVANCED SETUP mode

While pressing the **STRAIGHT** key, press the **MAIN ZONE** key and keep **STRAIGHT** key pressed until "ADVANCED SETUP" appears on the front panel display.

5 Select firmware update from the menu

Press the **PROGRAM** key until "UPDATE····USB" is displayed.



6 Start firmware update

a. Press **INFO** key to start the update.

(Update process may take up to 10 minutes)

* If "UPDATE SUCCESS" appears, this means your receiver is already up-to-date. In this case, power off to exit from Advanced Setup. Your AV receiver is ready for normal use.

Firmware update in progress

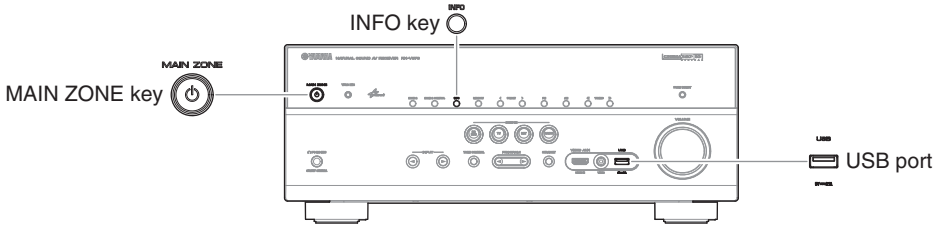
Caution

DO NOT interrupt power during the update.

In case the power is accidentally cut off resulting in a condition where you can't recover normal operation, refer to the troubleshooting method (**Troubleshooting CASE 2**) on the last page.

b. When completed, "UPDATE SUCCESS" appears on the display.

c. Turn off the power of the receiver by pressing the **MAIN ZONE** key.

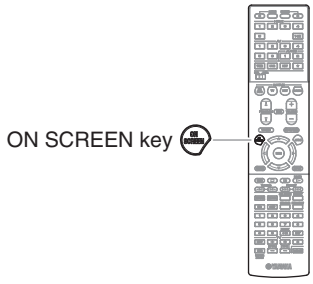


7 Check the updated firmware version

a. Power on the AV receiver and press the **ON SCREEN** key on the remote control.

b. Select "Information" > "System".

c. Confirm that the firmware version is updated to the latest version.



Congratulations!

You have completed the firmware update. Your AV receiver is ready for normal use.

Troubleshooting

CASE 1 Error message appeared during the update

Cause: For some reason, the receiver can't read the firmware data.

Method: For your solution, check the following

[Update through Internet]

❏ Check Internet connection.
Your Internet connection is working by playing an Internet radio station.
(See owner's manual for details)

[Update by USB thumb drive]

❏ USB thumb drive is connected properly to the receiver.

❏ USB thumb drive is not password protected.
(AV receiver cannot read data from a security protected USB thumb drive)

❏ Make sure the USB thumb drive is inserted before the receiver is powered on for the update.

❏ The firmware data, R0309-xxxx.bin is stored in the root directory of the USB thumb drive.

❏ There is no other data except the firmware data in the USB thumb drive.

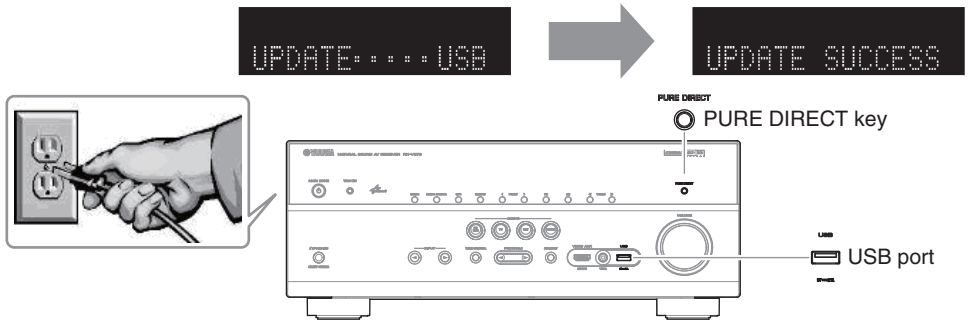
❏ No folders are created in the USB thumb drive.
Else, retry the update by USB using another USB thumb drive.

CASE 2 Firmware update doesn't start for other reasons

- **Receiver doesn't power up after the update.**
- **Or, error message appeared when confirming the firmware version.**

Recovery method using USB method:

1. Unplug the AC power cable from wall outlet.
2. Insert the USB thumb drive which has the firmware data stored inside, into the USB port located on the front panel.
3. Press and hold the **PURE DIRECT** key and keep it pressed while you plug the AC power cable back into the wall outlet again.
"USB UPDATE" will appear on the front display. Then, release the **PURE DIRECT** key.
4. The update will start automatically.
5. When "UPDATE····USB" appears on the display, firmware update is completed.
Power off the receiver and remove the USB thumb drive.
6. Confirm updated firmware version.



RX-A720

FIRMWARE UPDATING PROCEDURE

IMPORTANT NOTICE

Do not attempt to update your Yamaha receiver using any other data file except those provided directly from the Yamaha website or through your network connection.
Follow the instructions carefully and do not attempt any other procedures not specified in the instructions provided by Yamaha.
Improperly updated products may cause improper operation, and any parts or service required to restore proper operation will not be covered under the Yamaha Limited Warranty.

Choose from the following 2 methods to update to the latest firmware.

Click here for Firmware Update Through the Internet

(Connection to the Internet is required)

Click here for Firmware Update by USB

(A USB thumb drive is required)

In case of error, see the Troubleshooting section

RX-A720

Firmware Update Through the Internet

Requirement: Internet connection

Your receiver is connected to the Internet if you can receive Internet radio stations.
(See owner's manual for details)

1 Power off the receiver (Standby mode)

2 Enter the ADVANCED SETUP mode

While pressing the **STRAIGHT** key, press the **MAIN ZONE** key and keep **STRAIGHT** key pressed until "ADVANCED SETUP" appears on the front panel display.

* "ADVANCED SETUP" is displayed only for a few seconds.

3 Select "FIRM UPDATE" from the menu

a. Press the **PROGRAM** key until "UPDATE····USB" is displayed.

b. Then, press **STRAIGHT** key until "UPDATE·NETWORK" is displayed.

4 Start firmware update

a. Press **INFO** key to start the update.

(Update process may take up to 15 minutes)

* If "UPDATE SUCCESS" appears, this means your receiver is already up-to-date. In this case, power off to exit from Advanced Setup. Your AV receiver is ready for normal use.

Firmware update in progress

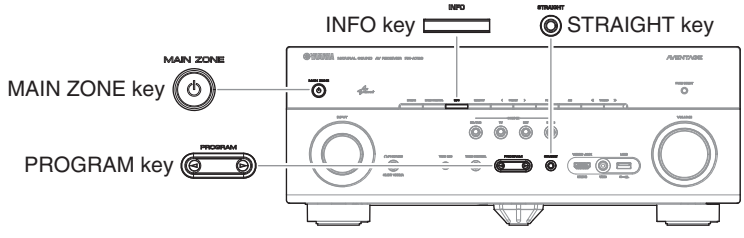
Caution

DO NOT interrupt power during the update.

In case the power is accidentally cut off resulting in a condition where you can't recover normal operation, refer to the troubleshooting method (**Troubleshooting CASE 2**) on the last page.

b. When completed, "UPDATE SUCCESS" appears on the display.

c. Turn off the power of the receiver by pressing the **MAIN ZONE** key.



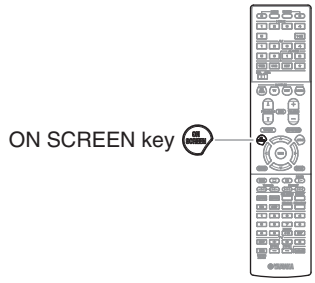
RX-A720

5 Check the updated firmware version

a. Power on the AV receiver and press the **ON SCREEN** key on the remote control.

b. Select “Information” > “System”.

c. Confirm that the firmware version is updated to the latest version.



Congratulations!

You have completed the firmware update. Your AV receiver is ready for normal use.

RX-A720

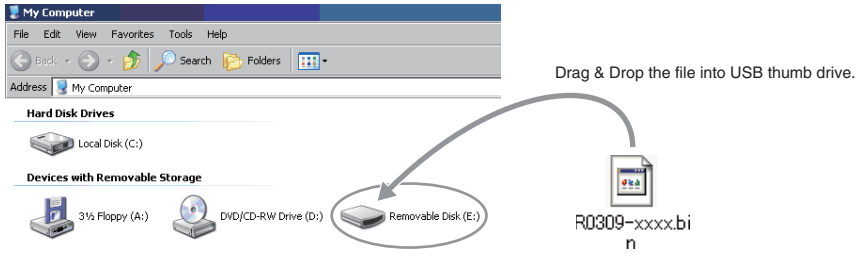
Firmware Update by USB

Requirement: USB thumb drive, with enough free space to store over 25MB.
(File system with FAT16 or FAT32 format)

Firmware file provided by YAMAHA,"R0309-xxxx.bin".

1 Prepare USB thumb drive for the update

Download the firmware, unzip and copy "R0309-xxxx.bin" into the root directory of the USB thumb drive.



2 Power off the receiver (Standby mode)

3 Insert the USB thumb drive

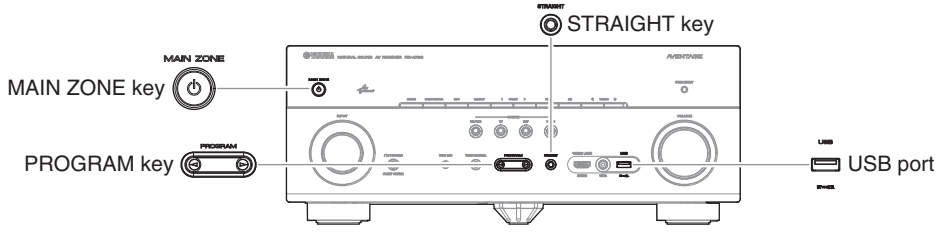
USB port is located at the lower left corner of the front panel.

4 Enter the ADVANCED SETUP mode

While pressing the **STRAIGHT** key, press the **MAIN ZONE** key and keep **STRAIGHT** key pressed until "ADVANCED SETUP" appears on the front panel display.

5 Select firmware update from the menu

Press the **PROGRAM** key until "UPDATE····USB" is displayed.



RX-A720

6 Start firmware update

a. Press **INFO** key to start the update.

(Update process may take up to 10 minutes)

* If "UPDATE SUCCESS" appears, this means your receiver is already up-to-date. In this case, power off to exit from Advanced Setup. Your AV receiver is ready for normal use.

Firmware update in progress

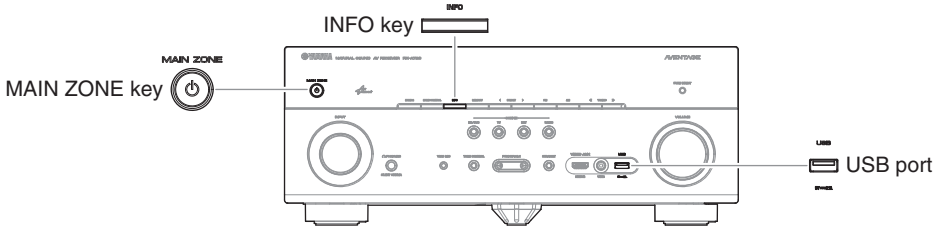
Caution

DO NOT interrupt power during the update.

In case the power is accidentally cut off resulting in a condition where you can't recover normal operation, refer to the troubleshooting method (**Troubleshooting CASE 2**) on the last page.

b. When completed, "UPDATE SUCCESS" appears on the display.

c. Turn off the power of the receiver by pressing the **MAIN ZONE** key.

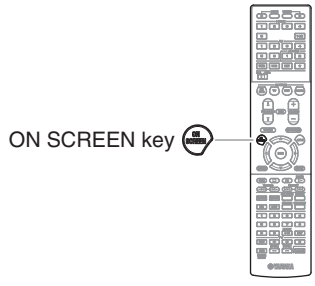


7 Check the updated firmware version

a. Power on the AV receiver and press the **ON SCREEN** key on the remote control.

b. Select "Information" > "System".

c. Confirm that the firmware version is updated to the latest version.



Congratulations!

You have completed the firmware update. Your AV receiver is ready for normal use.

RX-A720

Troubleshooting

CASE 1 Error message appeared during the update

Cause: For some reason, the receiver can't read the firmware data.

Method: For your solution, check the following

[Update through Internet]

❏ Check Internet connection.
Your Internet connection is working by playing an Internet radio station.
(See owner's manual for details)

[Update by USB thumb drive]

❏ USB thumb drive is connected properly to the receiver.

❏ USB thumb drive is not password protected.
(AV receiver cannot read data from a security protected USB thumb drive)

❏ Make sure the USB thumb drive is inserted before the receiver is powered on for the update.

❏ The firmware data, R0309-xxxx.bin is stored in the root directory of the USB thumb drive.

❏ There is no other data except the firmware data in the USB thumb drive.

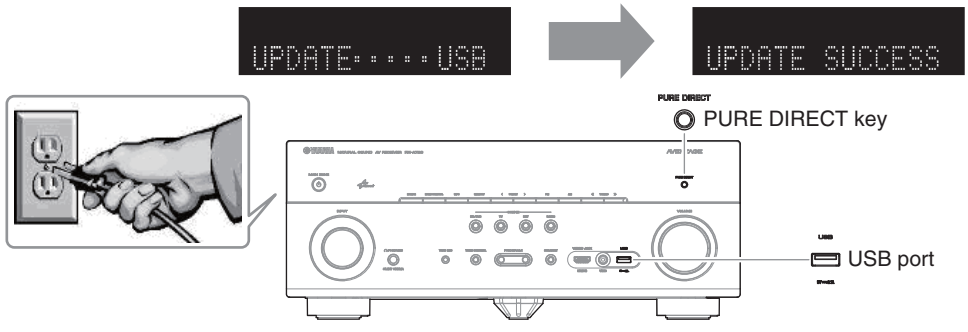
❏ No folders are created in the USB thumb drive.
Else, retry the update by USB using another USB thumb drive.

CASE 2 Firmware update doesn't start for other reasons

- **Receiver doesn't power up after the update.**
- **Or, error message appeared when confirming the firmware version.**

Recovery method using USB method:

1. Unplug the AC power cable from wall outlet.
2. Insert the USB thumb drive which has the firmware data stored inside, into the USB port located on the front panel.
3. Press and hold the **PURE DIRECT** key and keep it pressed while you plug the AC power cable back into the wall outlet again.
"USB UPDATE" will appear on the front display. Then, release the **PURE DIRECT** key.
4. The update will start automatically.
5. When "UPDATE▫▫▫▫USB" appears on the display, firmware update is completed.
Power off the receiver and remove the USB thumb drive.
6. Confirm updated firmware version.



MEMO

RX-V673/HTR-6065/
RX-A720

YAMAHA